

## **EXHIBIT 21**



**DSP Report, Wave 4**  
*Analysis for DoubleClick Bid Manager*

2018

**Advertiser Perceptions™**  
What Advertisers Think™  
The More You Know  
The Stronger Your Brand  
The More You'll Sell™

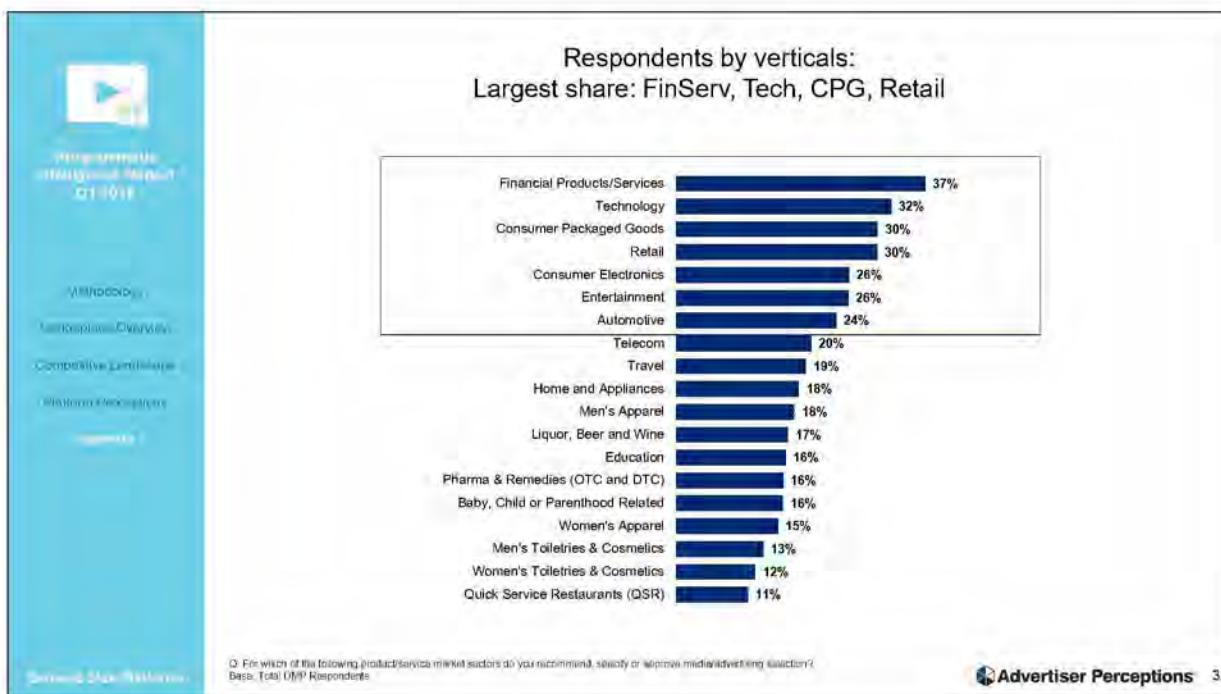
Programmatic  
Intelligence Report  
Q1 2018

Methodology  
Marketplace Overview  
Competitive Landscape  
Advertiser Perceptions  
Appendix  
Second Side Platforms

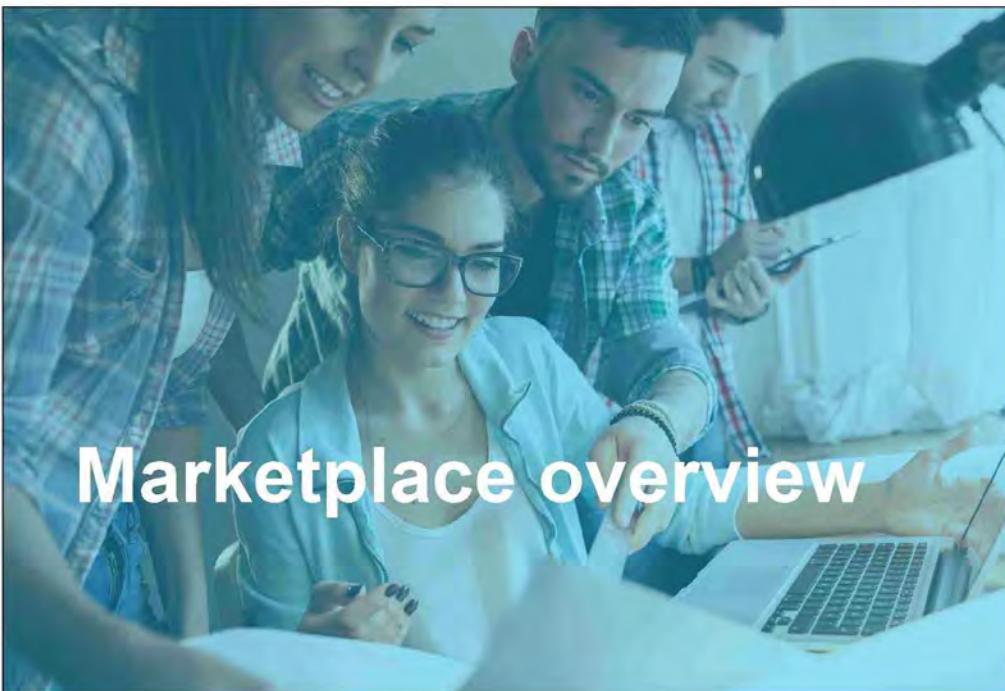
## Methodology and respondent profile

Representing Top 200 Advertisers in the U.S.	Leading Ad Categories	700+ Key Decision Makers
	<ul style="list-style-type: none"> <li>Automotive</li> <li>Parenthood Related</li> <li>Consumer Electronics</li> <li>Consumer Packaged Goods</li> <li>Education</li> <li>Entertainment</li> <li>Financial Products/Services</li> <li>Home &amp; Appliance</li> <li>Liquor, Beer and Wine</li> <li>Apparel/Fashion</li> <li>Toiletries &amp; Cosmetics</li> <li>Pharmaceuticals</li> <li>Quick Service Restaurants</li> <li>Retail</li> <li>Technology</li> <li>Telecommunications</li> <li>Travel</li> </ul>	<ul style="list-style-type: none"> <li>Sample: Marketer and Agency contacts from The Advertiser Perceptions Media Decision Maker Database and third-party databases as needed.</li> <li>Main Qualification: Involved in the purchase of programmatic advertising; Used or Worked with DSPs or DMPs in the past year.</li> <li>Fielded: January 2018</li> <li>Incentives include cash &amp; data</li> </ul> <p>Respondents totals:        • N=395 DSP Report        • N=345 DMP Report</p> <p>Mean annual digital spend:        • \$20.8 Million</p> <p>Ranging in title:        • 48% VP and above        • 35% Director/Supervisor        • 17% Manager/Planner/Buyer</p> <p>Expressing opinions from:        • 51% Agencies        • 49% Marketers</p>

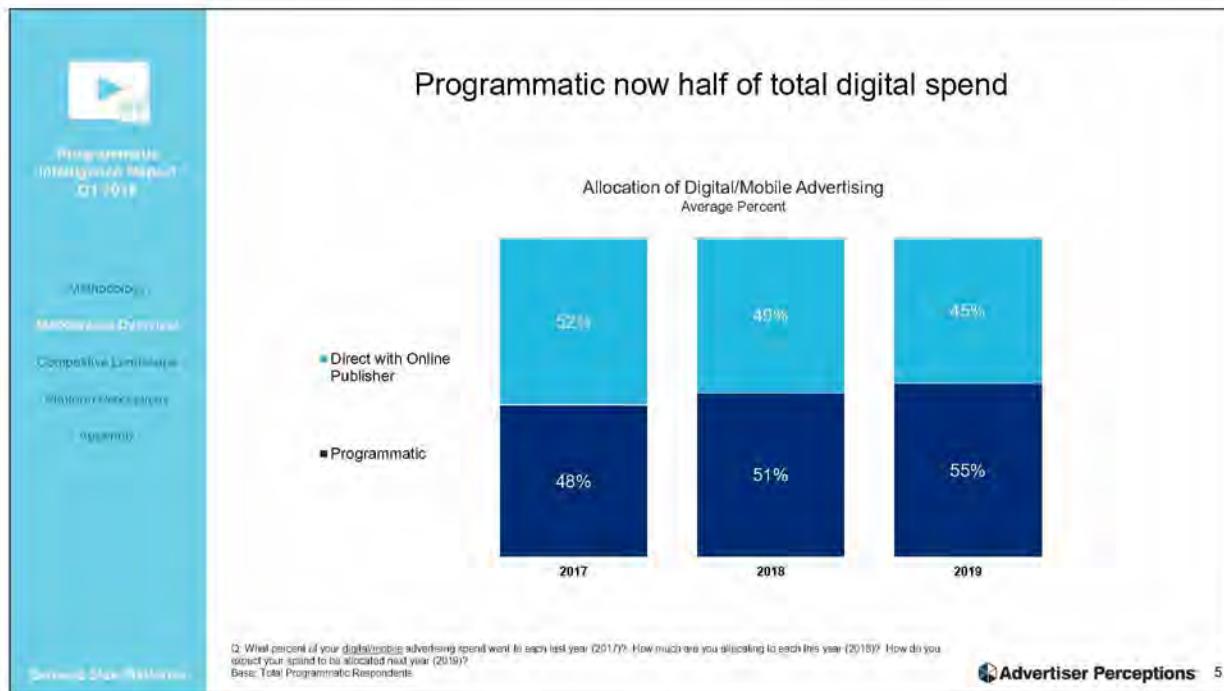
**Advertiser Perceptions** 2



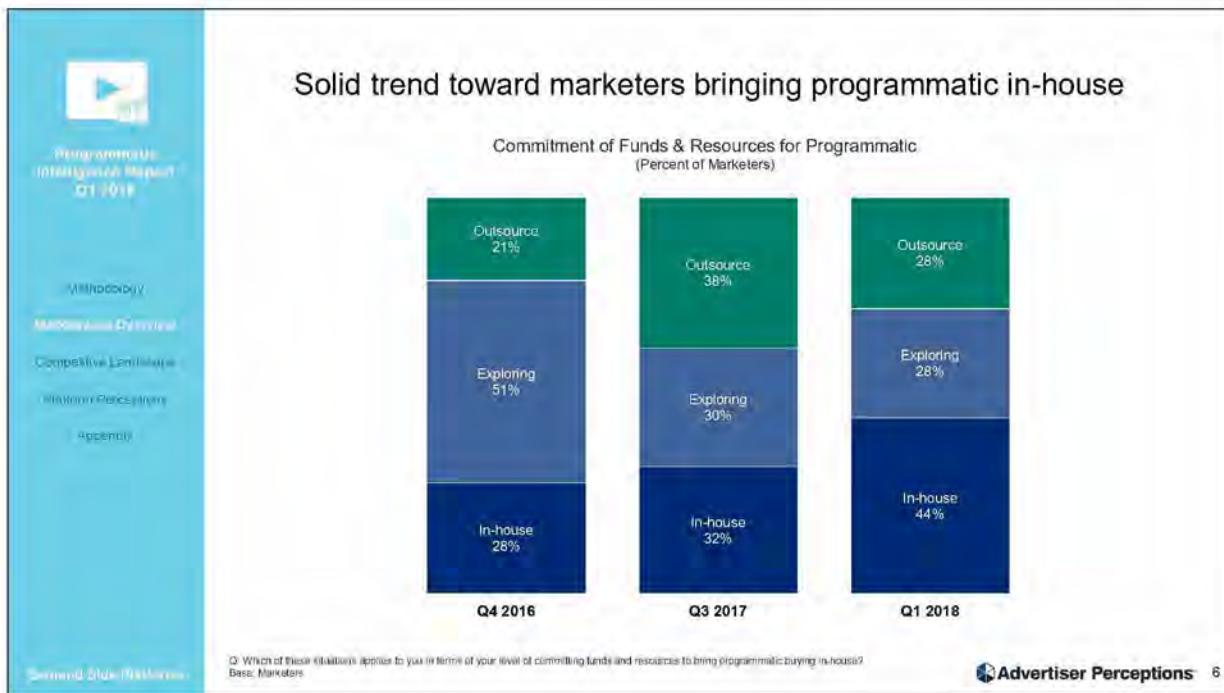
QS60



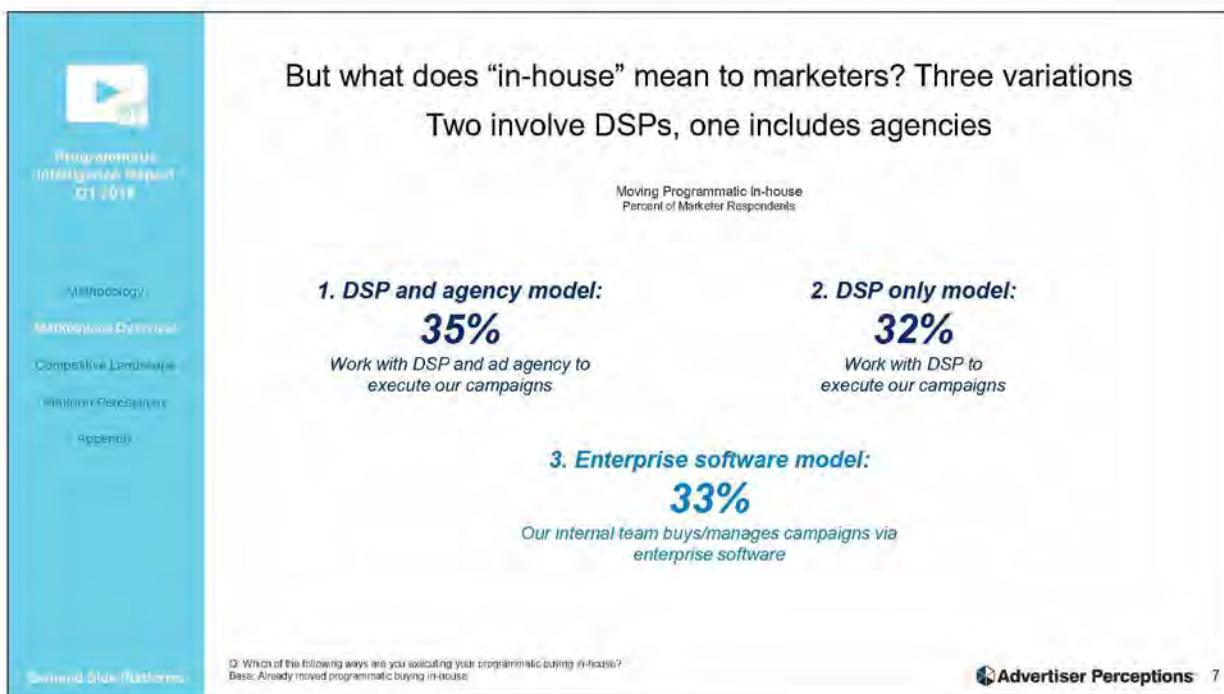
 Advertiser  
Perceptions



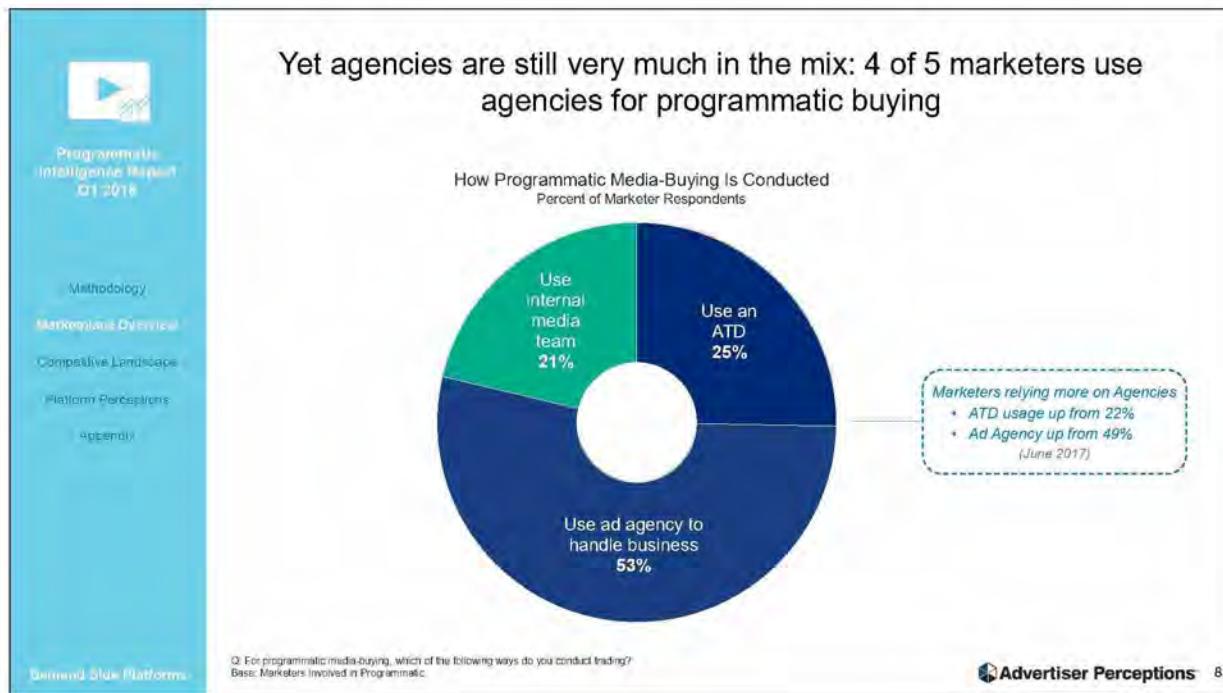
Q20



Q50



Q50x1, Q50x2



Q106



What does programmatic solve?  
Targeting, control, savings, and reach

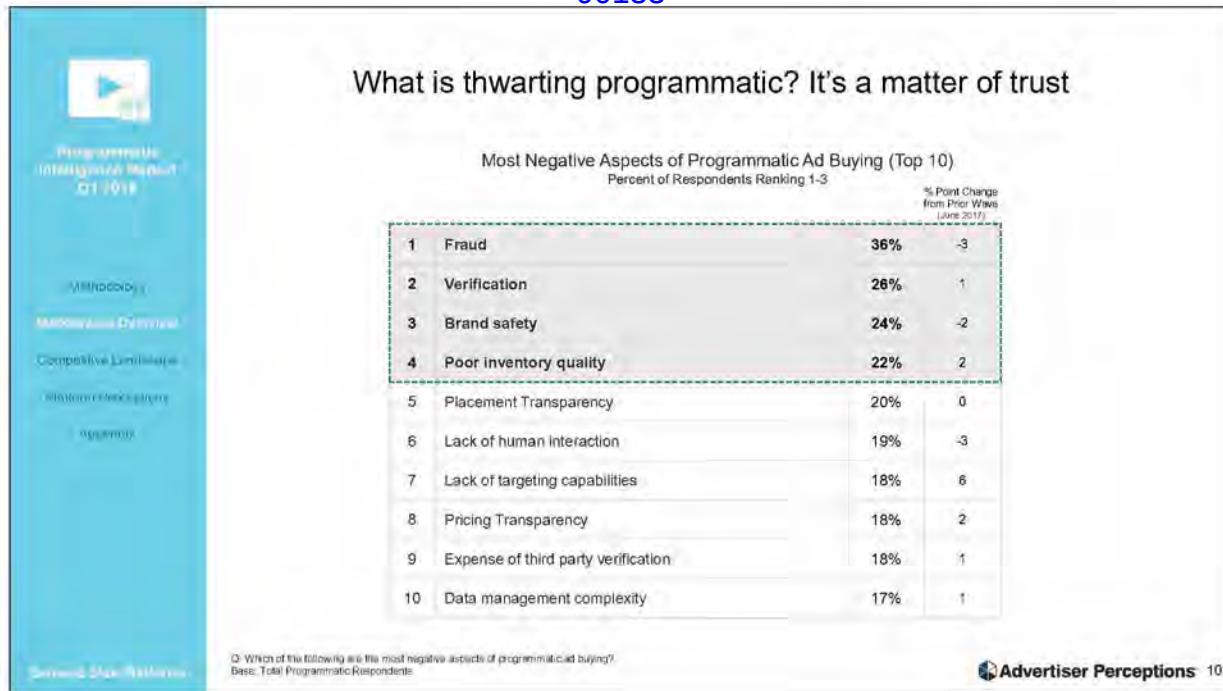
Top Issues Programmatic Ad Buying Solves  
Percent of Respondents Ranking 1-3

1	Improved targeting capabilities	39%
2	Better control of data, audiences and tactics	36%
3	More cost efficient than publisher direct	35%
4	Broader reach	34%
5	Better time and resource efficiency	30%
6	Better in-flight optimization	22%
7	Price transparency	22%
8	More creative options	19%
9	Simplifies the RFP process	19%

Q: Which of the following are the top issues that programmatic ad buying helps solve?  
Base: Total Programmatic Respondents

 Advertiser Perceptions 9

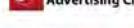
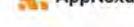
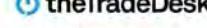
Q40

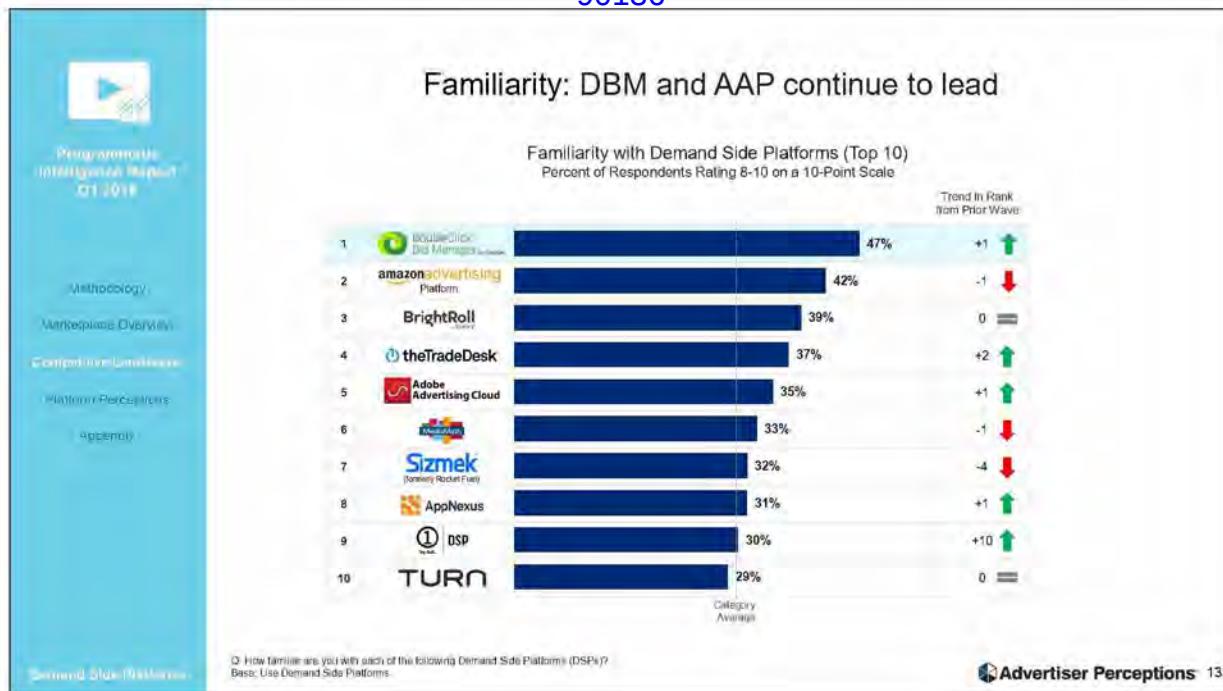


Q40

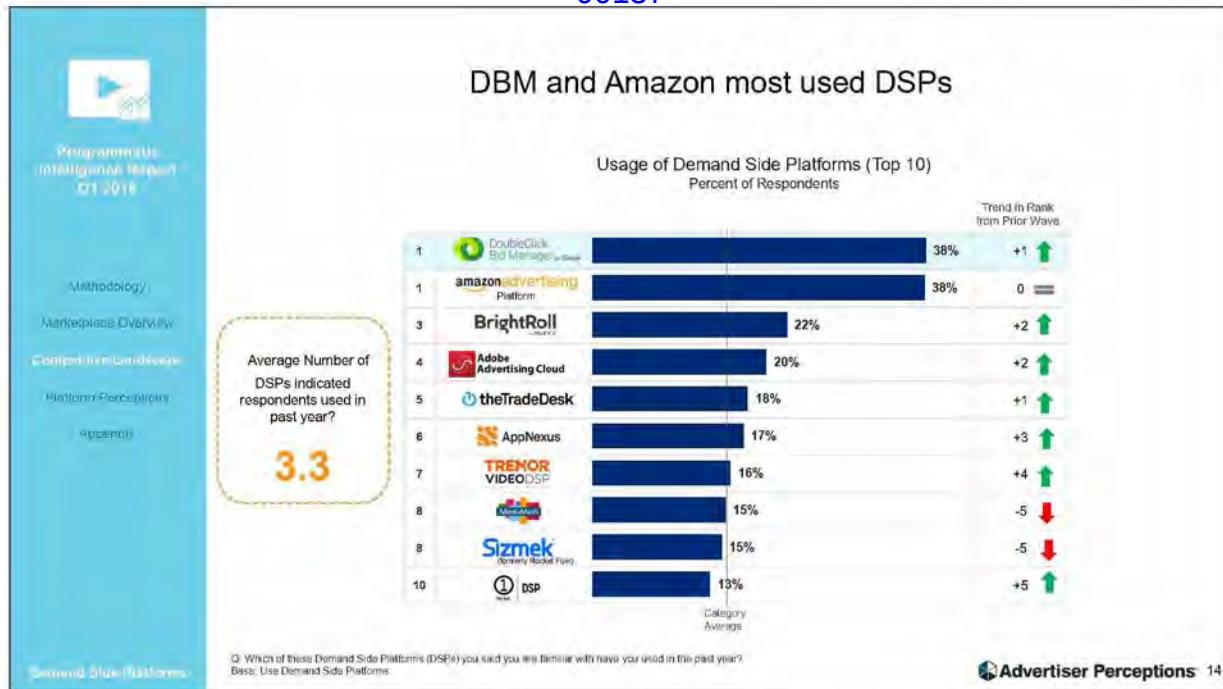


 Advertiser  
Perceptions

Demand side platforms measured	
 Programmatic Intelligence Report Q1 2016	
	
	
	
	
	
	
            	              
            	<p><b>A Demand Side Platform (DSP)</b> is a company that allows advertising clients to buy digital media on several different selling systems, or exchanges, through one interface.</p>



Q210



Q215

Usage: DBM leads with agencies, AAP with marketers

Usage of Demand Side Platforms (Top 10)  
Percent of Respondents

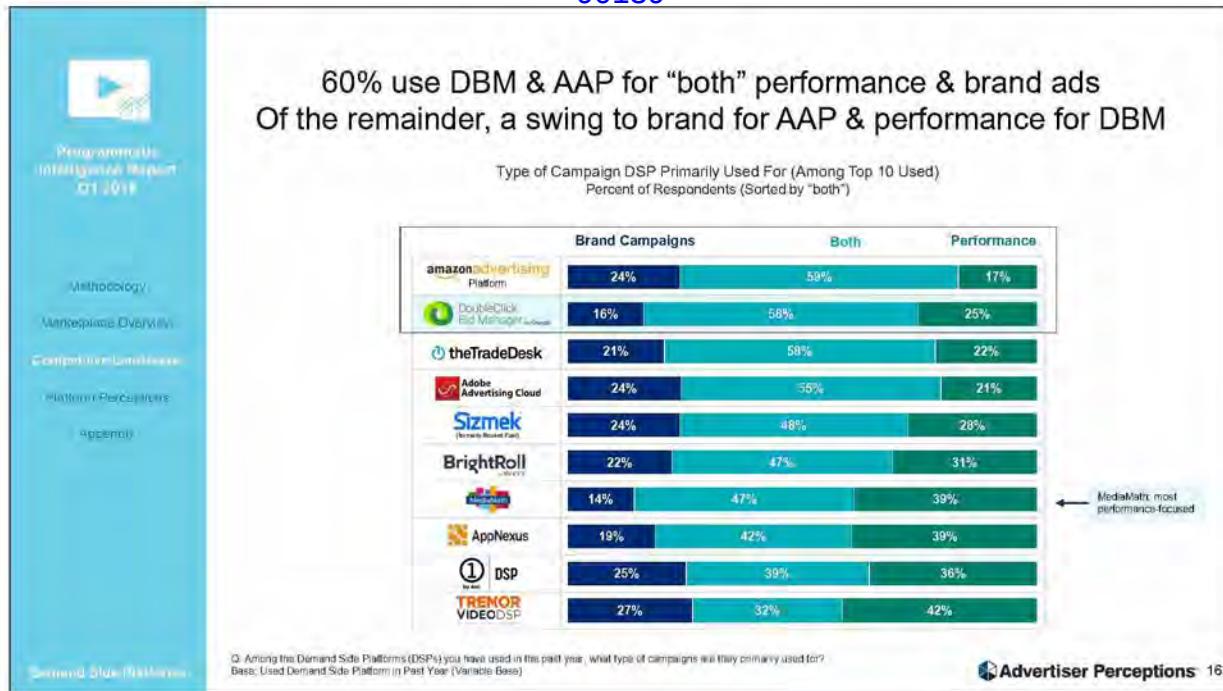
AGENCIES		MARKETERS	
1	DoubleClick Bid Manager (formerly Doubleclick)	41%	0
2	amazon advertising Platform	34%	-1
3	BrightRoll	24%	+4
4	Adobe Advertising Cloud	21%	0
5	theTradeDesk	21%	0
6	TREMOR VIDEODSP	20%	+4
7	Sizmek (formerly Rocket Fuel)	17%	-4
8	AppNexus	15%	-4
9	AppNexus	15%	+2
10	1 DSP	12%	+6

Trend in Rank from Prior Wave

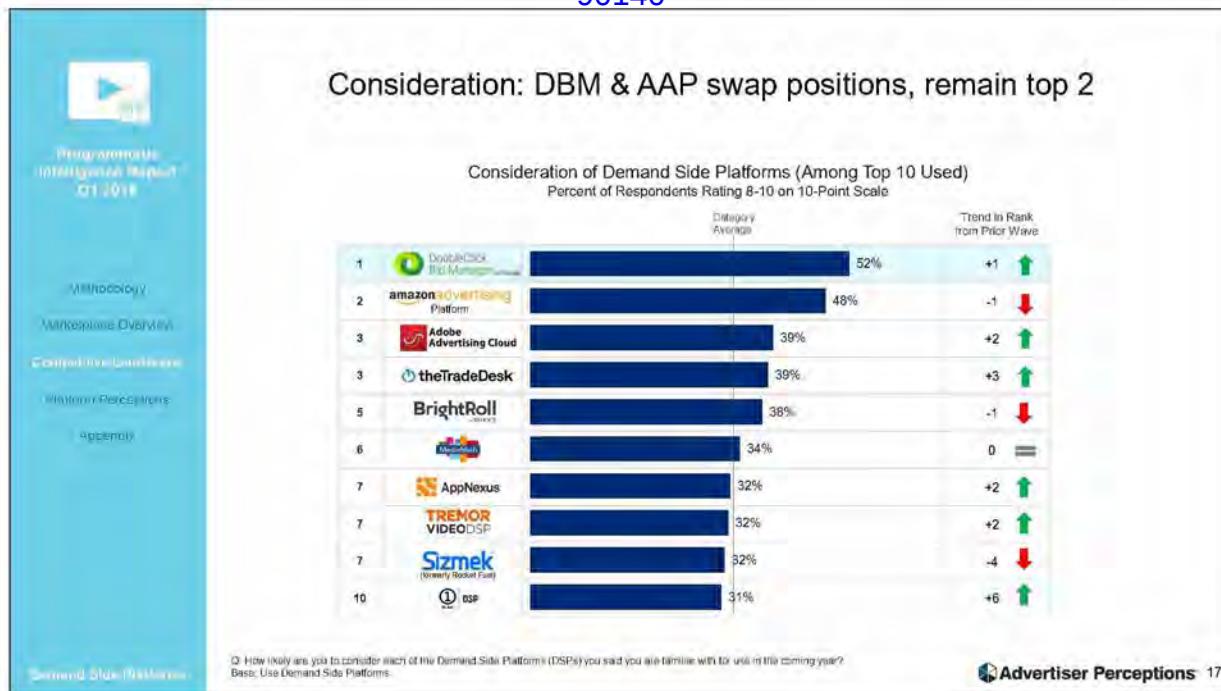
Q: Which of these Demand Side Platforms (DSPs) you said you are familiar with have you used in the past year?  
Base: Use Demand Side Platforms

 Advertiser Perceptions 15

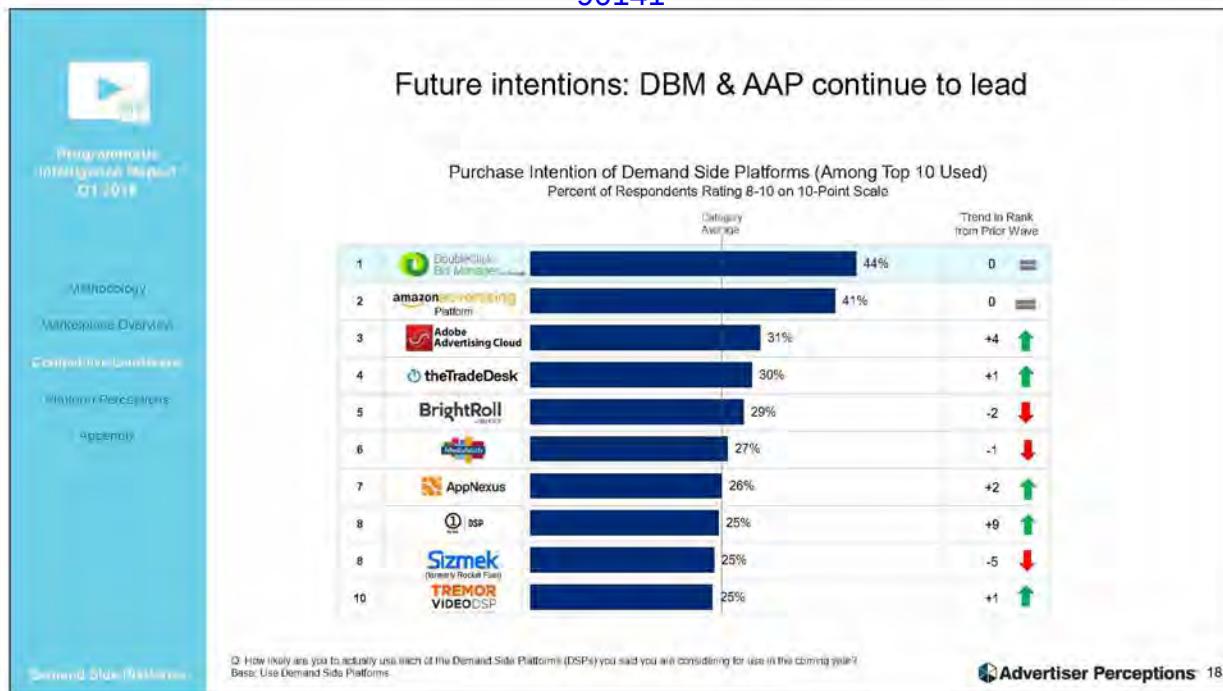
Q215



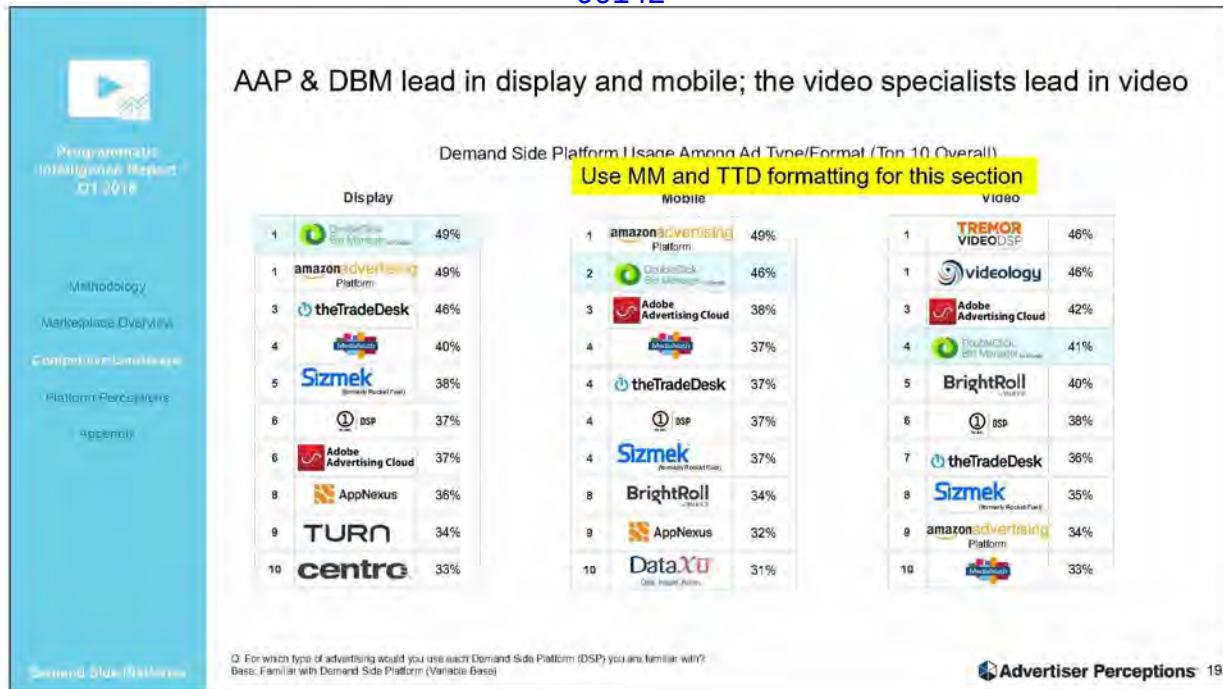
Q233a - NEW



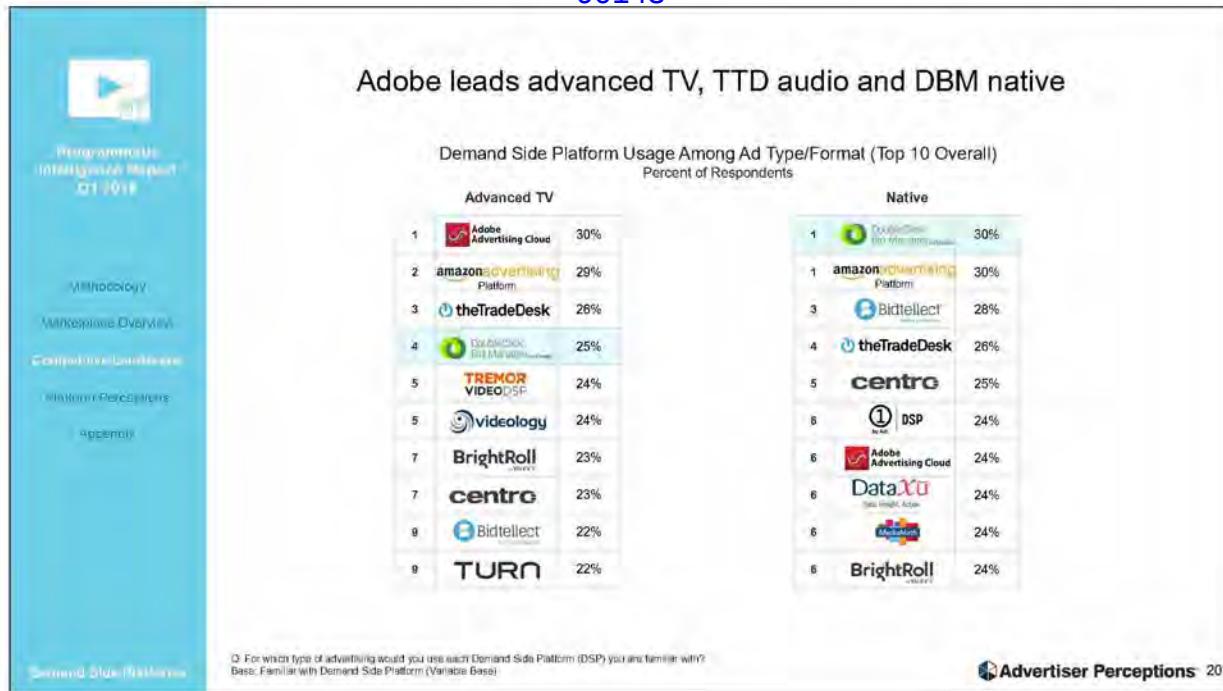
Q220



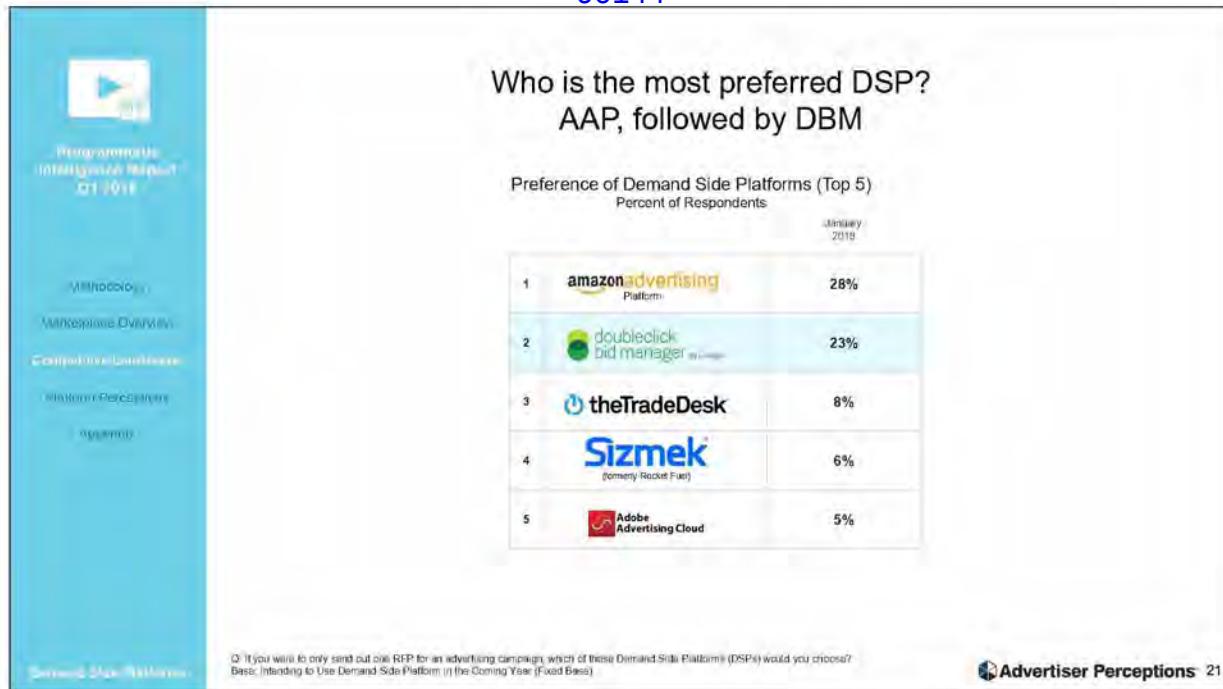
Q225



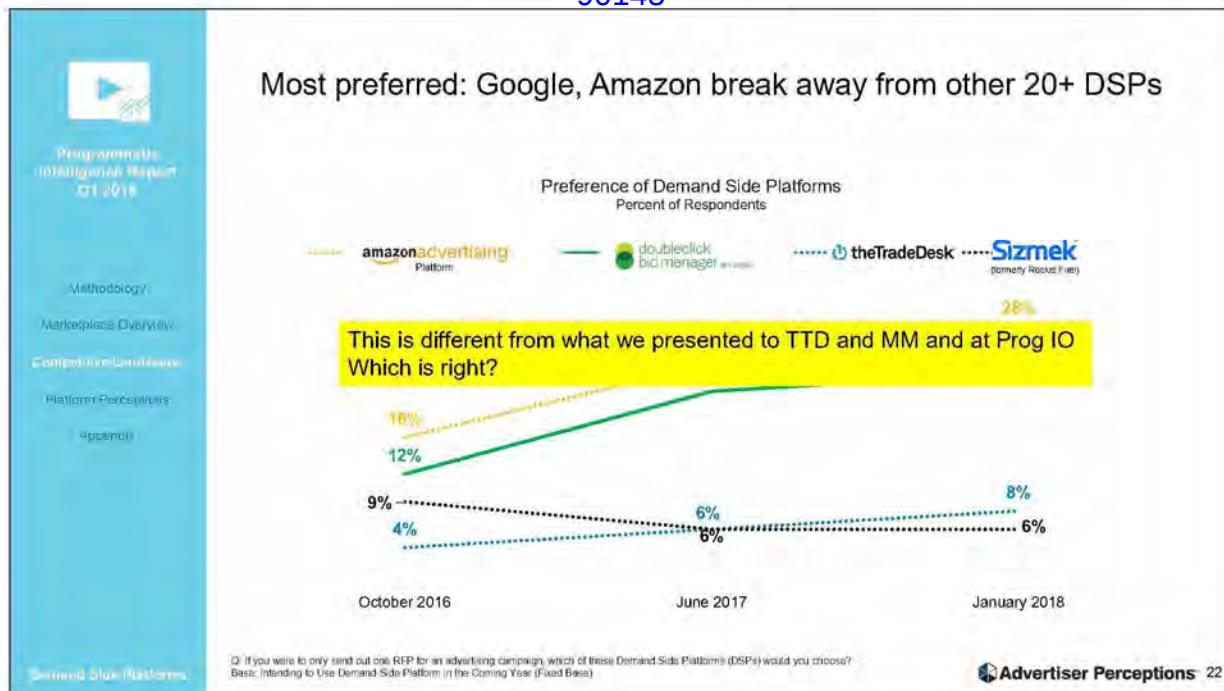
Q232



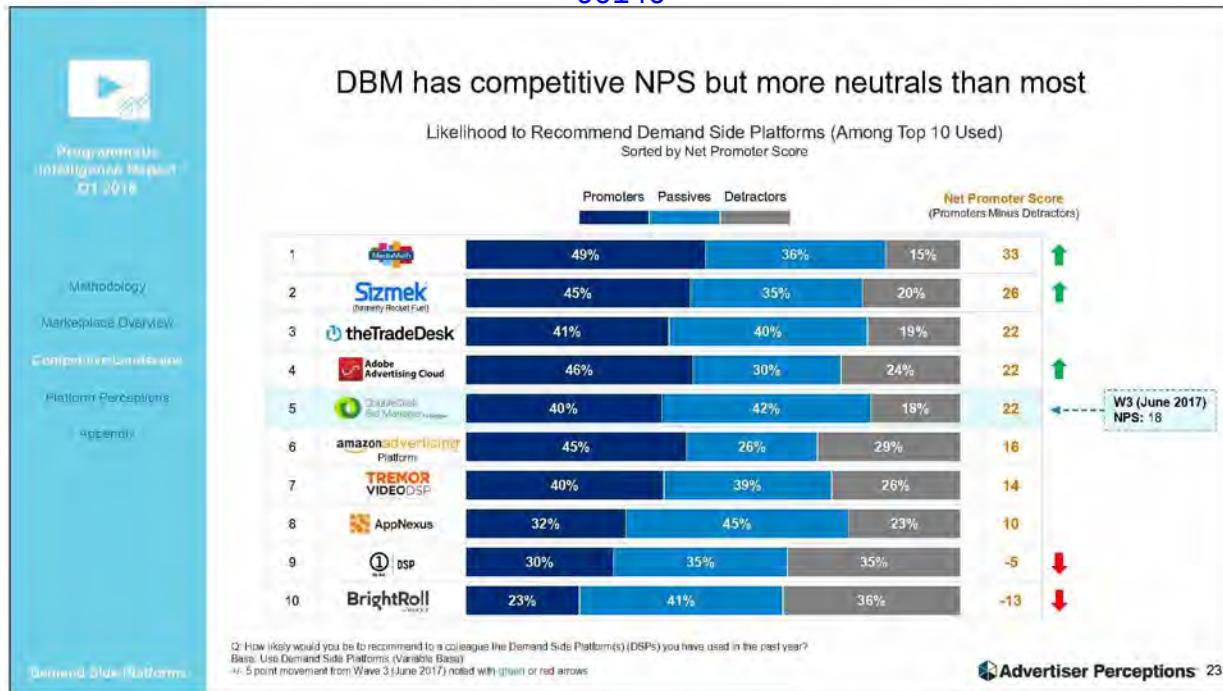
Q232



Q226



Q226



Q230



What does DBM do especially well? Scale, expertise, analytics, expertise

“

DoubleClick Bid Manager by Google

Recognized expertise, speedy implementation, best in class analytics and reporting.  
- Marketer, VP

Deliver audiences at scale with a UI that works well and have good on-going support.  
- Agency Director

They have the best return based on our spending and can easily scale our campaigns and focus on the best demographics to reach our targeted audience.  
- Marketer, Director

Industry-specific applications that provide real-time accurate metrics to our clients based on specified parameters.  
- Agency President

”

Q: What do they do especially well?  
Base: Total Programmatic Respondents

Advertiser Perceptions 25

Q52c

 <h2>Why AAP? Note attraction of cloud and enterprise software capabilities</h2> <h3>TTD: all about service &amp; support</h3>	
 <p>“</p> <p>As a <b>cloud driven market platform</b>, they have few equals in terms of potential market reach and their ability to provide <b>big data analytics</b> to measure campaign performance.</p> <p>- Marketer, Strategic Executive</p> <p>Are <b>transparent</b>, <b>lower price</b>, and <b>reach the right audiences</b>.</p> <p>- Marketer, VP</p> <p><b>Software and tools</b> that help advertisers buy <b>programmatic ads</b> and help publishers generate <b>rev.</b></p> <p>- Agency VP</p>	 <p>“</p> <p>Their account team is <b>highly responsive</b> and extremely <b>knowledgeable</b> of the capabilities of their platform.</p> <p>- Agency Planner</p> <p><b>Partner</b> in developing <b>best-in-class solutions</b> to problems</p> <p>- Agency VP</p> <p>They are extremely adept at <b>partnering with our agency</b>, and offered a lot of <b>support and training</b> as we got our employees up to speed on managing the programmatic platform.</p> <p>- Agency Director</p>
<p>Q: What do they do especially well? Base: Total Programmatic Respondents</p>	 <p>Advertiser Perceptions 26</p>

Q52c



Programmatic Intelligence Report Q1 2018

Marketplace Dynamics

Competitive Landscape

Advertiser Perceptions

Demand Side Platform

Q1 2018

Of the 23 criteria below, which ones matter most when selecting a DSP?

CRITERIA COVERED	CRITERIA COVERED
<b>Selection Criteria:</b> 1. API and integrations 2. Forecasting tools 3. Media optimization of placements during a campaign 4. QA/Troubleshooting capabilities 5. Reporting features 6. Identity management 7. Marketplace quality (including verification partner integrations – white lists, black lists, brand safety, fraud, etc.) 8. Audience scale or reach 9. Audience targeting capabilities 10. Margin/budget management tools 11. Easy to use interface/UX 12. Placement cloning and bulk uploads 13. Bid multipliers and custom settings 14. Advanced solutions for additional tactics and scaling of buys	<b>Analytics and Insights:</b> 1. Thought leadership (white papers, articles on insights about market, technology, applications) 2. Audience analytics reporting 3. Quality of post ad campaign evaluation, insights, recommendations 4. Quality of training and application QA
<b>Sales and Support:</b> 1. Technology expertise 2. Understanding of client goals, needs 3. Responsiveness to client needs during and post implementation 4. Is easy to work with 5. Innovation and roadmap insight	

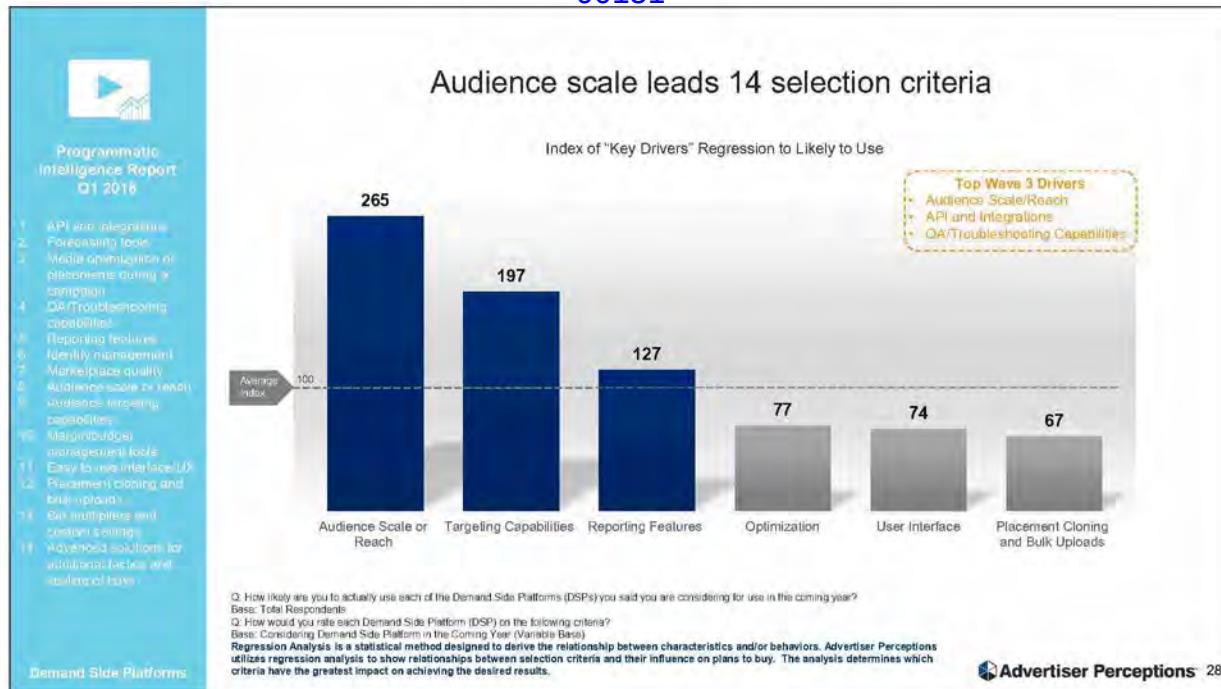
Q: How likely are you to actually use each of the Demand Side Platforms (DSPs) you said you are considering for use in the coming year?  
Base: Total Respondents

Q: How likely are you to use a Demand Side Platform (DSP) on the following criteria?  
Q: Based on your own experience, please rate each Demand Side Platform's (DSP's) research and insights efforts in communicating its value as an advertising vehicle at each stage in the campaign  
Q: Based on your own experience, please rate each Demand Side Platform's (DSP's) sales team based on the following sales capabilities:  
Base: Considering Demand Side Platform in the Coming Year (Variable Base)

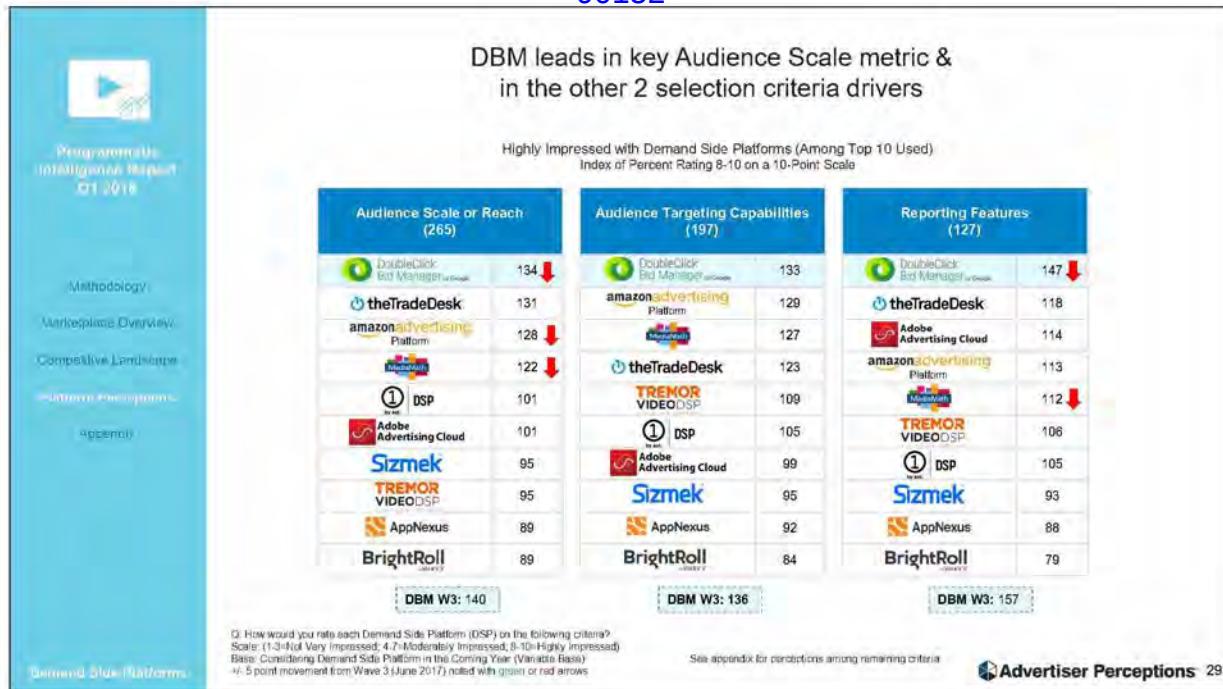
Advertiser Perceptions utilizes regression analysis to show relationships between selection criteria and their influence on plans to buy. The analysis determines which criteria have the greatest impact on achieving the desired results.

**Advertiser Perceptions** 27

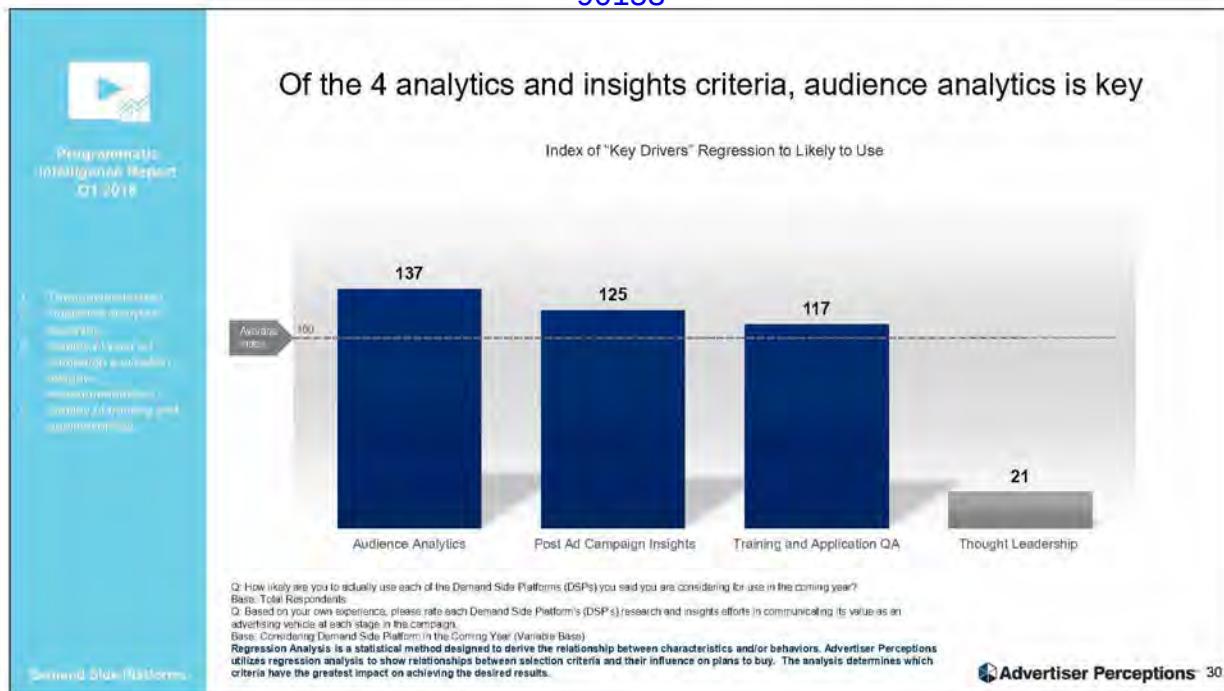
Q235, Q240, Q245



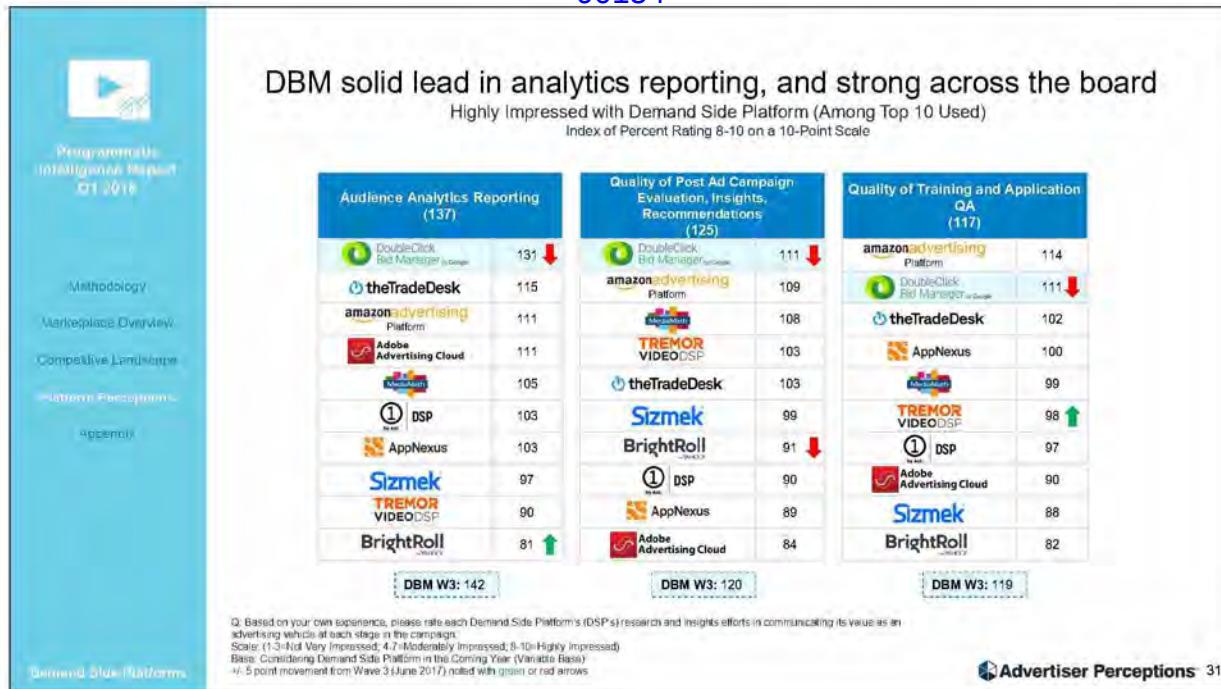
Q235



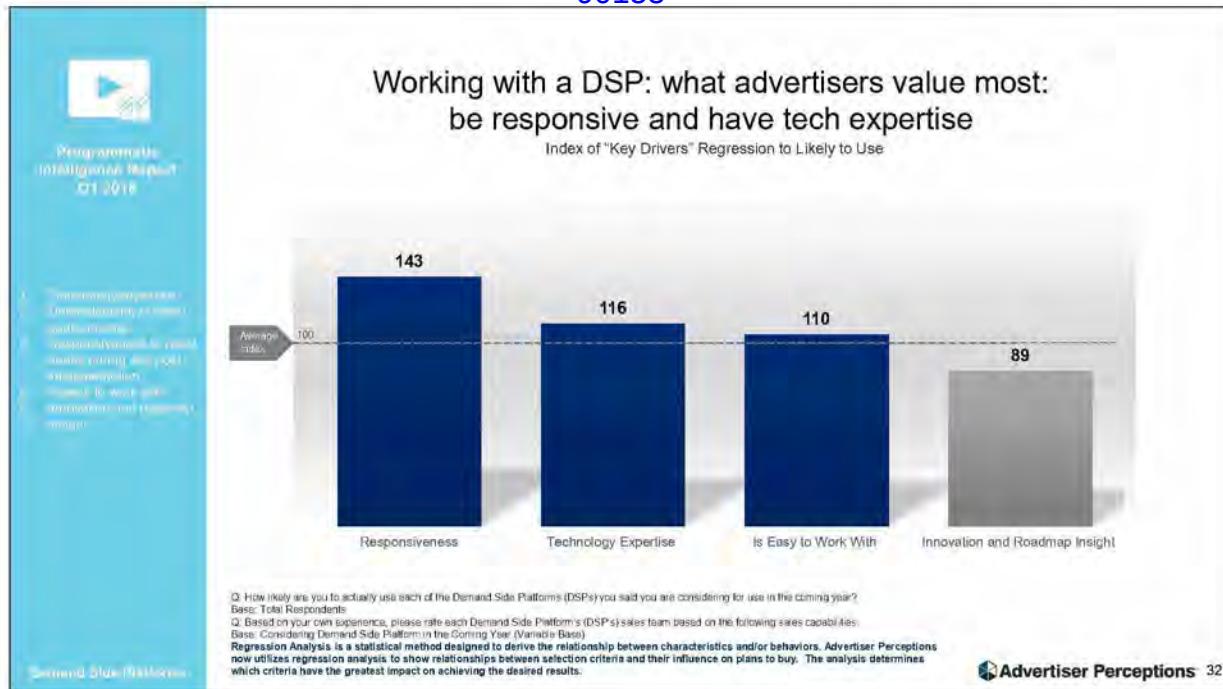
Q235



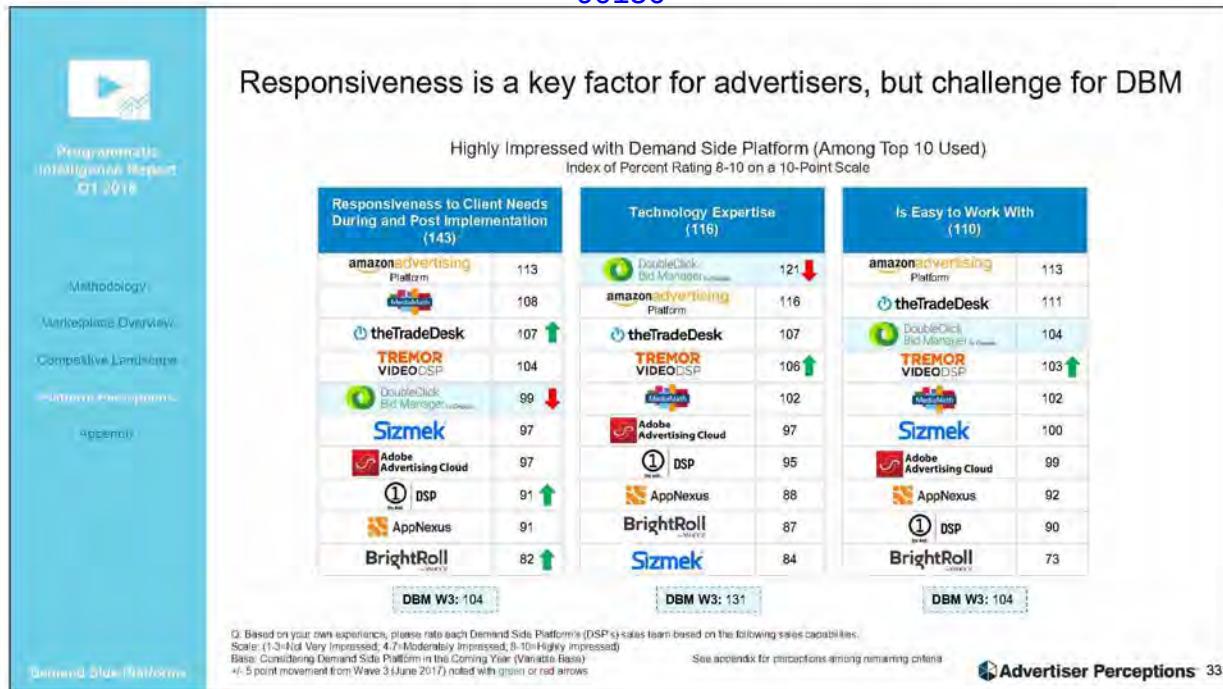
Q240



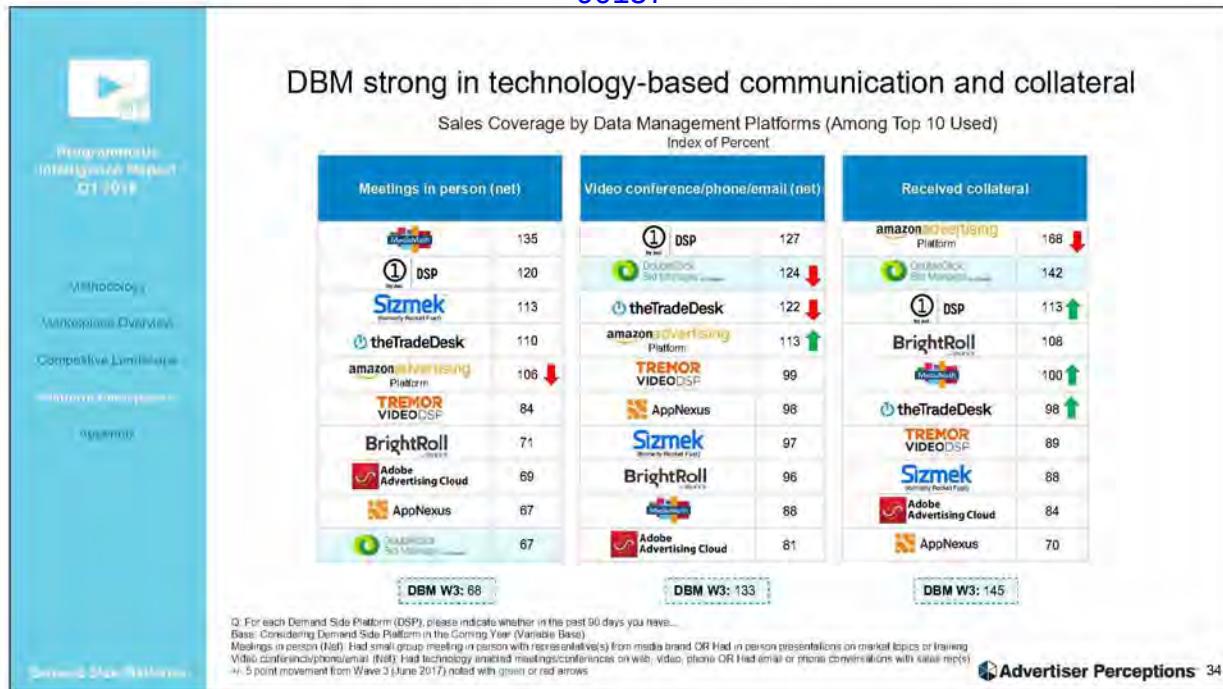
Q240



Q245



Q245



Q250

Meetings in person (Net) = 1) Had small group meeting in person with representative(s) from media brand OR 2) Had in person presentations on market topics or training

Video conference/phone/email (Net) = 1) Had technology enabled meetings/conferences on web, video, phone OR 2) Had email or phone conversations with sales rep(s)



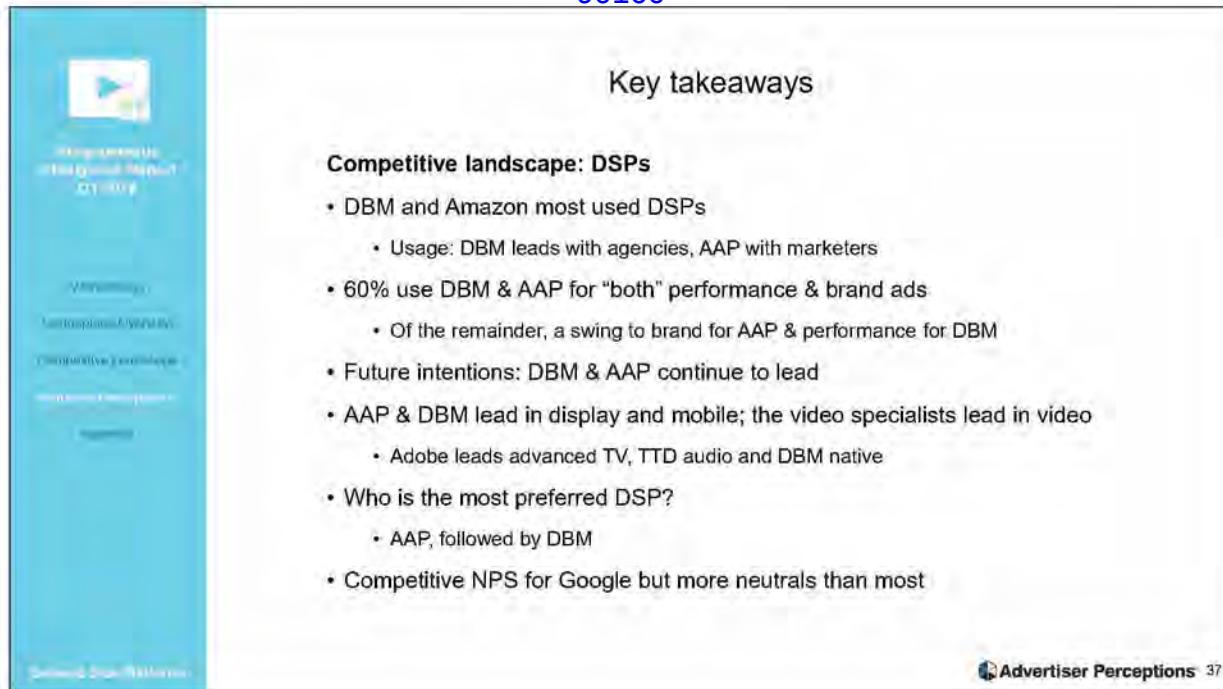


Key takeaways

**Marketplace overview**

- What does "in-house" mean to marketers? 3 variations
  - Two involve DSPs, one includes agencies
- Why is programmatic growing? Better targeting, leveraging data, efficiencies
- What is thwarting programmatic? It's a matter of trust

 Advertiser Perceptions 36

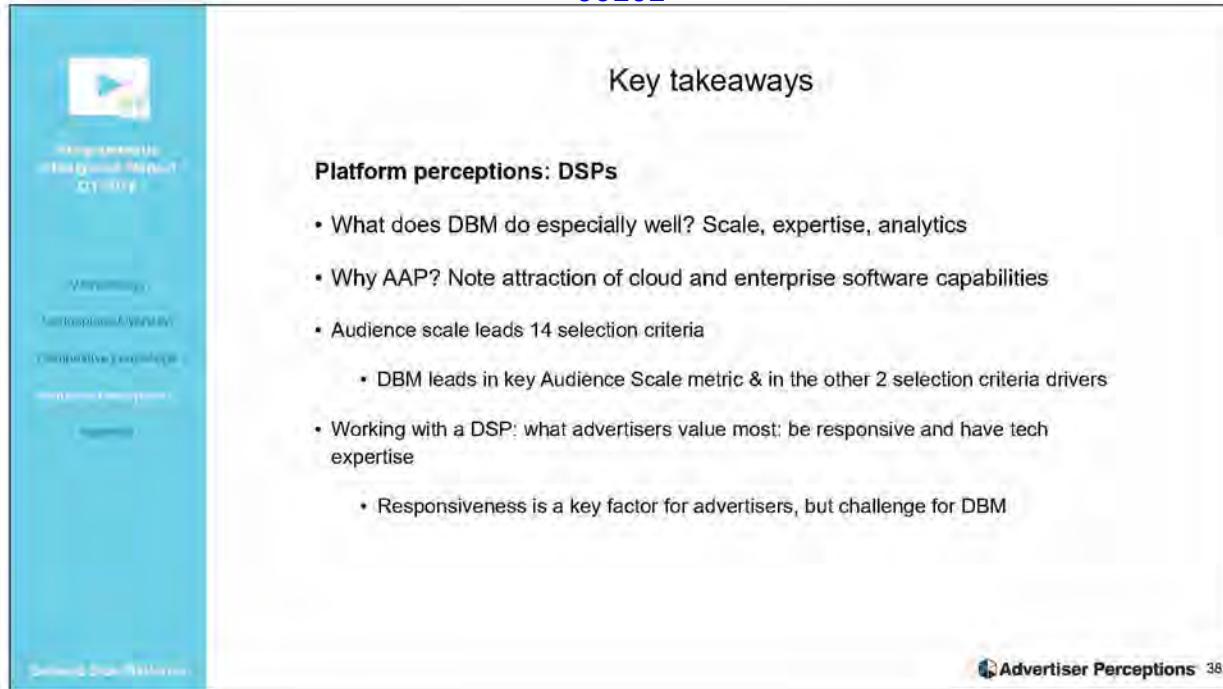


Key takeaways

**Competitive landscape: DSPs**

- DBM and Amazon most used DSPs
  - Usage: DBM leads with agencies, AAP with marketers
- 60% use DBM & AAP for "both" performance & brand ads
  - Of the remainder, a swing to brand for AAP & performance for DBM
- Future intentions: DBM & AAP continue to lead
- AAP & DBM lead in display and mobile; the video specialists lead in video
  - Adobe leads advanced TV, TTD audio and DBM native
- Who is the most preferred DSP?
  - AAP, followed by DBM
- Competitive NPS for Google but more neutrals than most

 Advertiser Perceptions 37

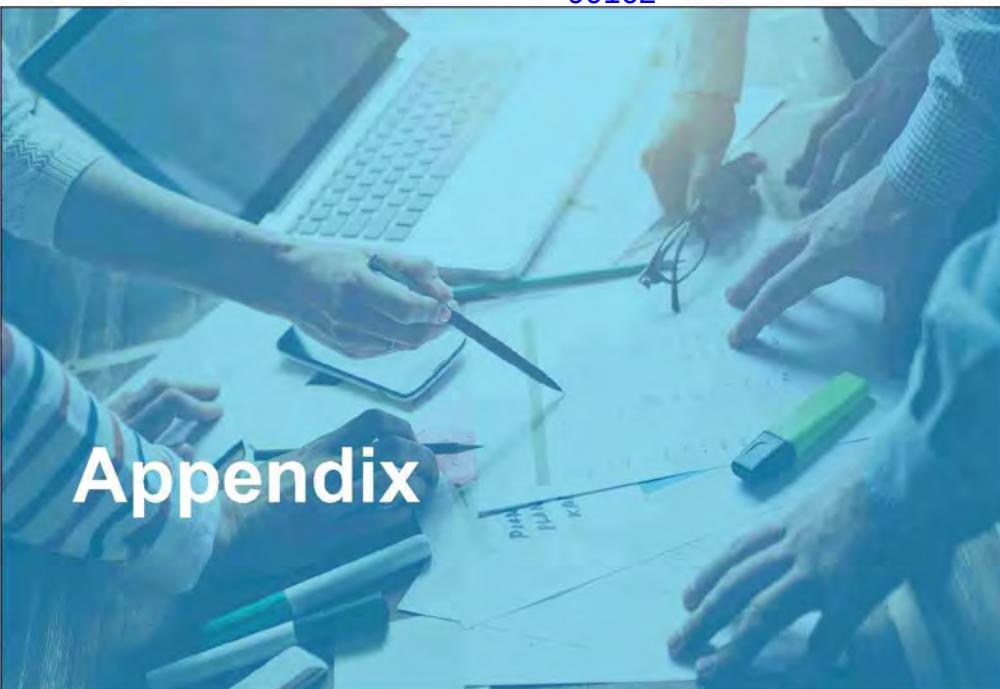


## Key takeaways

### Platform perceptions: DSPs

- What does DBM do especially well? Scale, expertise, analytics
- Why AAP? Note attraction of cloud and enterprise software capabilities
- Audience scale leads 14 selection criteria
  - DBM leads in key Audience Scale metric & in the other 2 selection criteria drivers
- Working with a DSP: what advertisers value most: be responsive and have tech expertise
  - Responsiveness is a key factor for advertisers, but challenge for DBM

 Advertiser Perceptions 38

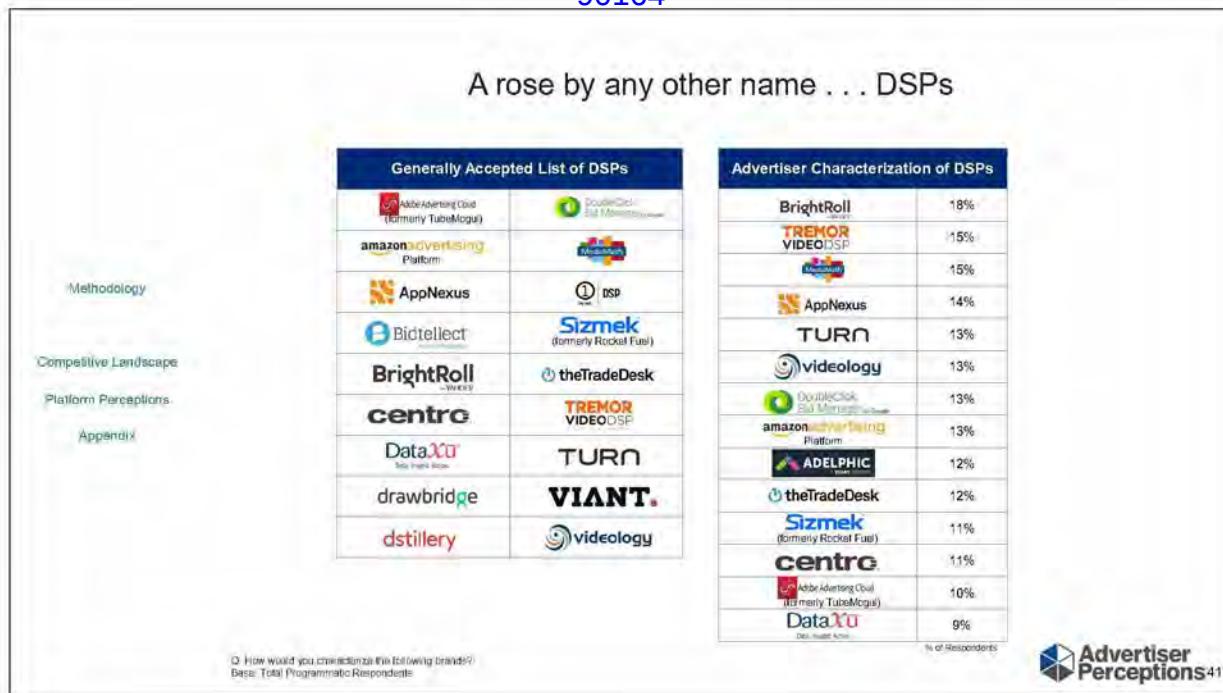


 Advertiser Perceptions



A Rose is a Rose:  
What's in a Name?

 Advertiser Perceptions



Q100a

## What do people think DoubleClick Bid Manager is?

% of respondents		
1	Both DSP and DMP	33%
2	Ad Network	29%
3	Agency Trading Desk	16%
4	DSP	13%
5	Other/ Don't Know	13%
6	Supply Side Platform	13%
7	DMP	8%

Correct Categorization

Q10a) How would you characterize the following brand?/  
Base: Total Programmatic Respondents



## What do people think Adobe Advertising Cloud is?

% of respondents		
1	Both DSP and DMP	32%
2	Ad Network	24%
3	Other/I Don't Know	19%
4	Supply Side Platform	13%
5	DMP	11%
6	DSP	10%
7	Agency Trading Desk	10%

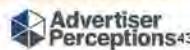
Methodology

Competitive Landscape

Platform Perceptions

Appendix

Q10a: How would you categorize the following brand? /  
Base: Total Programmatic Respondents

Correct Categorization  
Somewhat Correct Categorization  
 Advertiser Perceptions<sup>43</sup>

## What do people think The Trade Desk is?

% of respondents		
1	Agency Trading Desk	33%
2	Both DSP and DMP	26%
3	Ad Networks	16%
4	Other/ Don't Know	15%
5	DSP	12%
6	Supply Side Platform	8%
7	DMP	8%

Methodology

Competitive Landscape

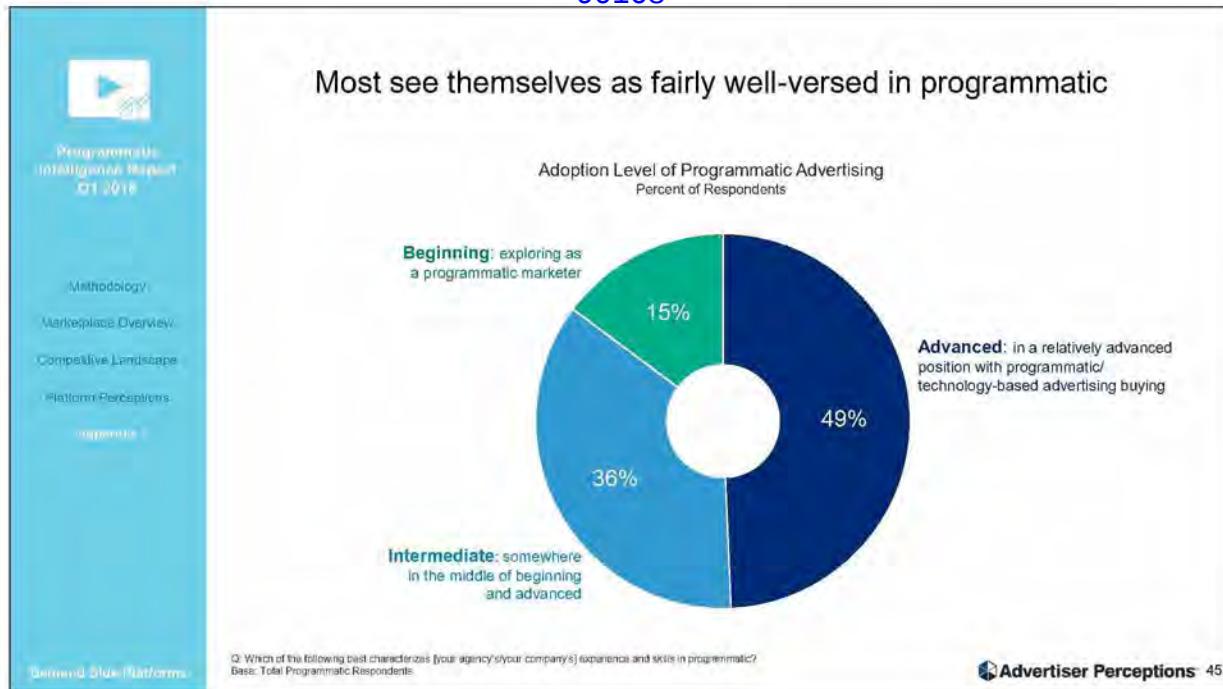
Platform Perceptions

Appendix

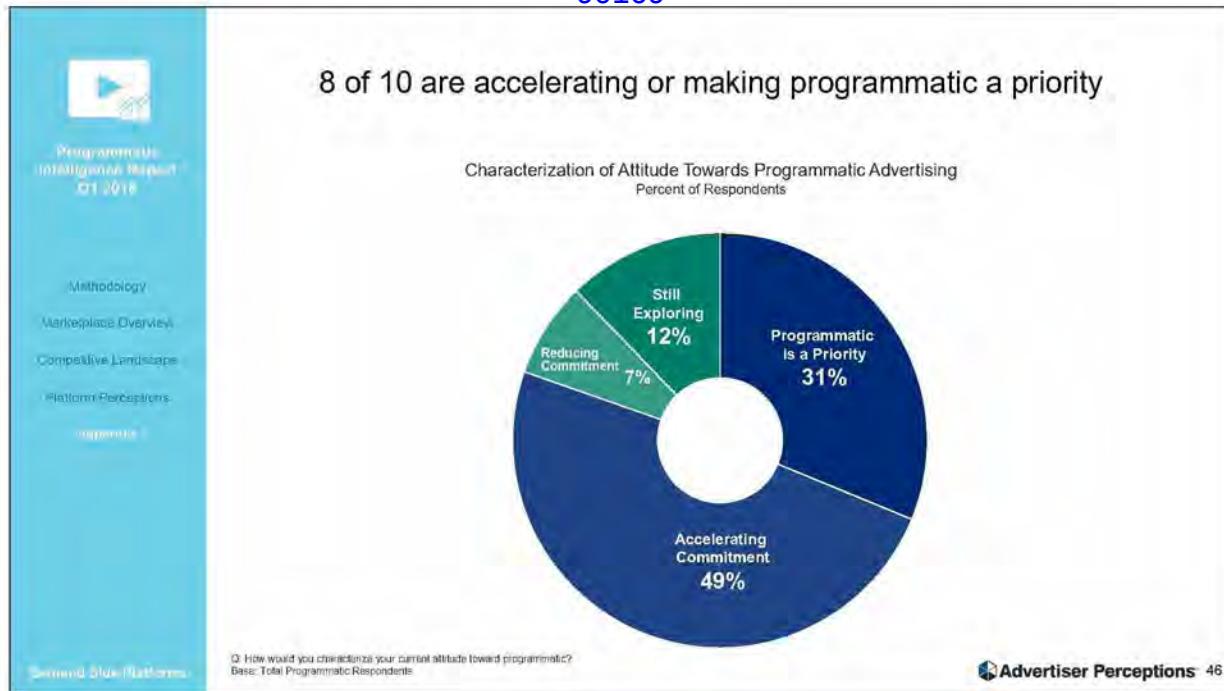
Correct Categorization

Q10a) How would you characterize the following entity? /  
Base: Total Programmatic Respondents

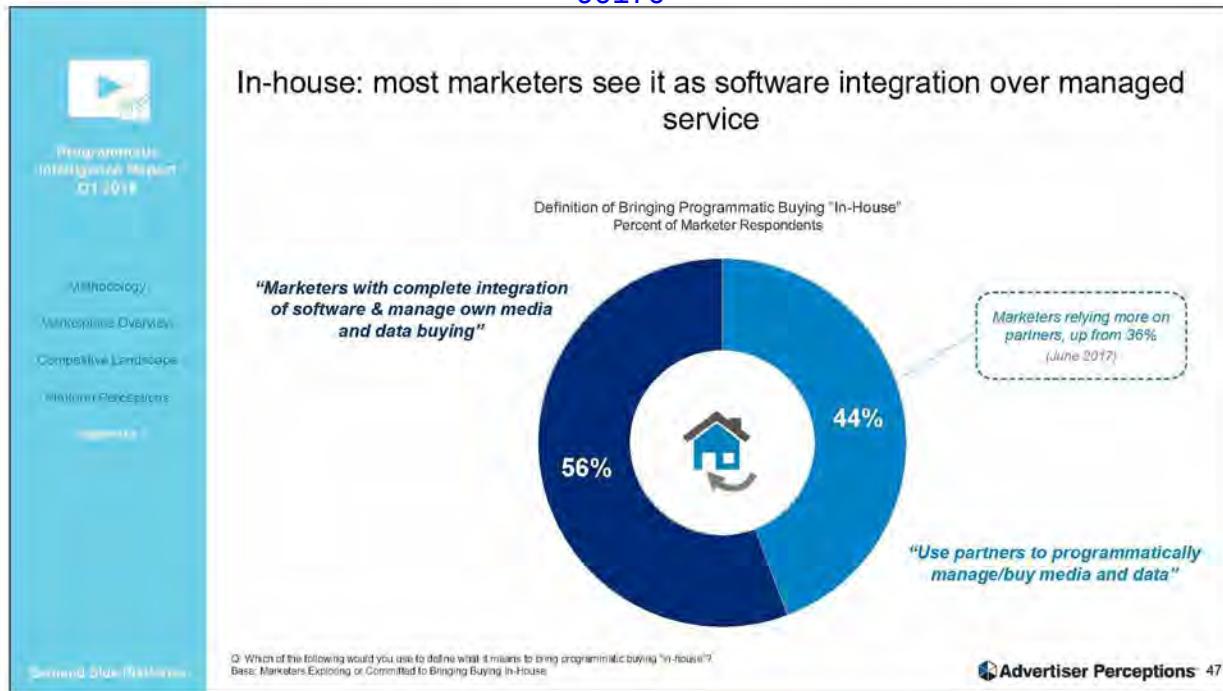




Q25

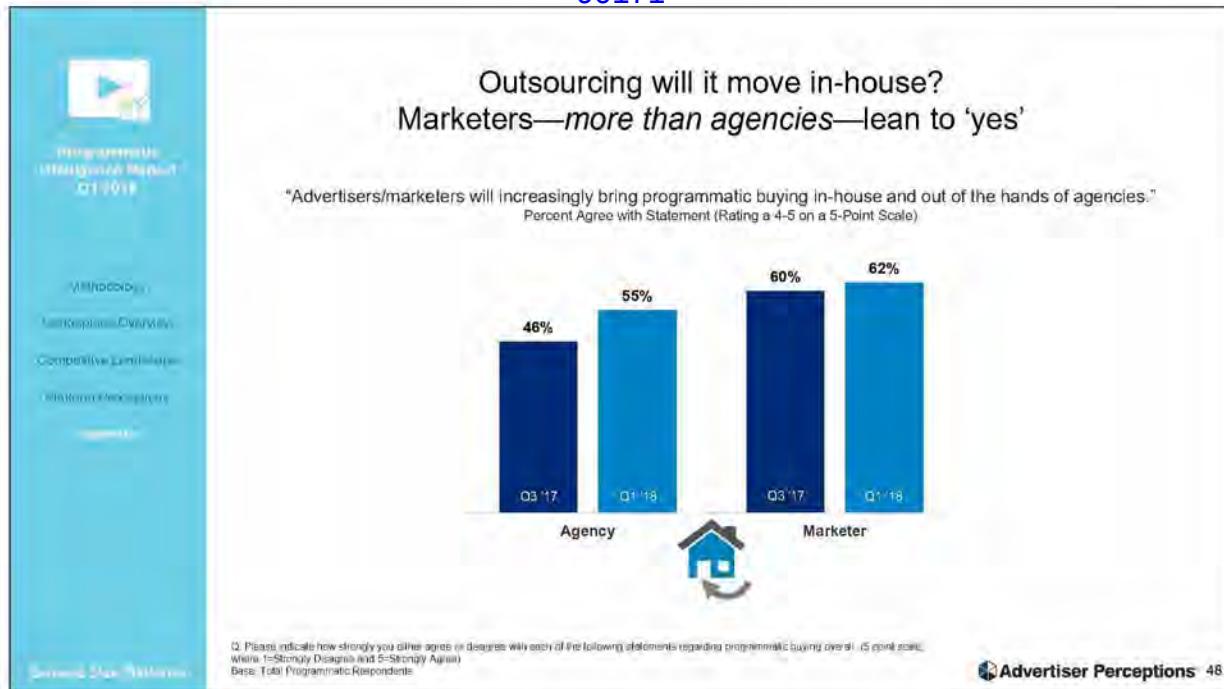


Q26 - NEW

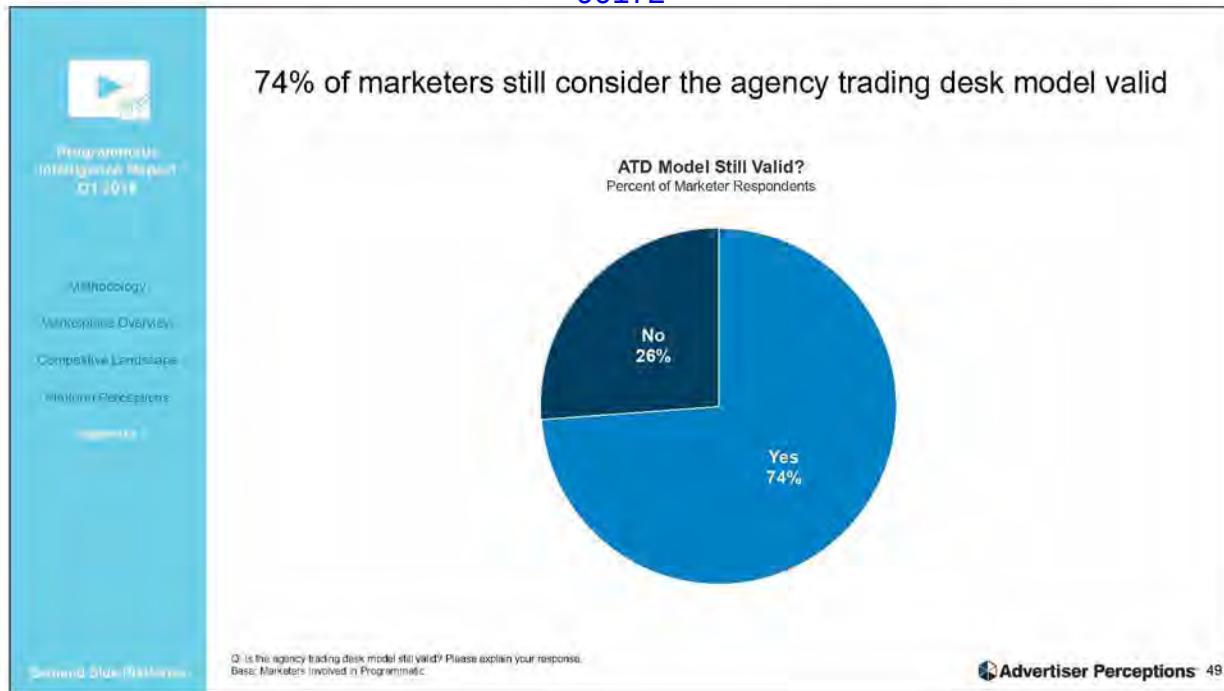


Q50a

Wave 3 - Current 2018: 64% Having complete integration of the software and managing the programmatic buying of media and data usage, 36% Utilizing marketing or advertising technology partners to help manage the use of data to buy advertising programmatically



Q45



Q105, Q105a



Programmatic  
Intelligence Report  
Q1 2018

Methodology  
Methodology Overview  
Competitive Landscape  
Market Perceptions  
Appendix

Download Report

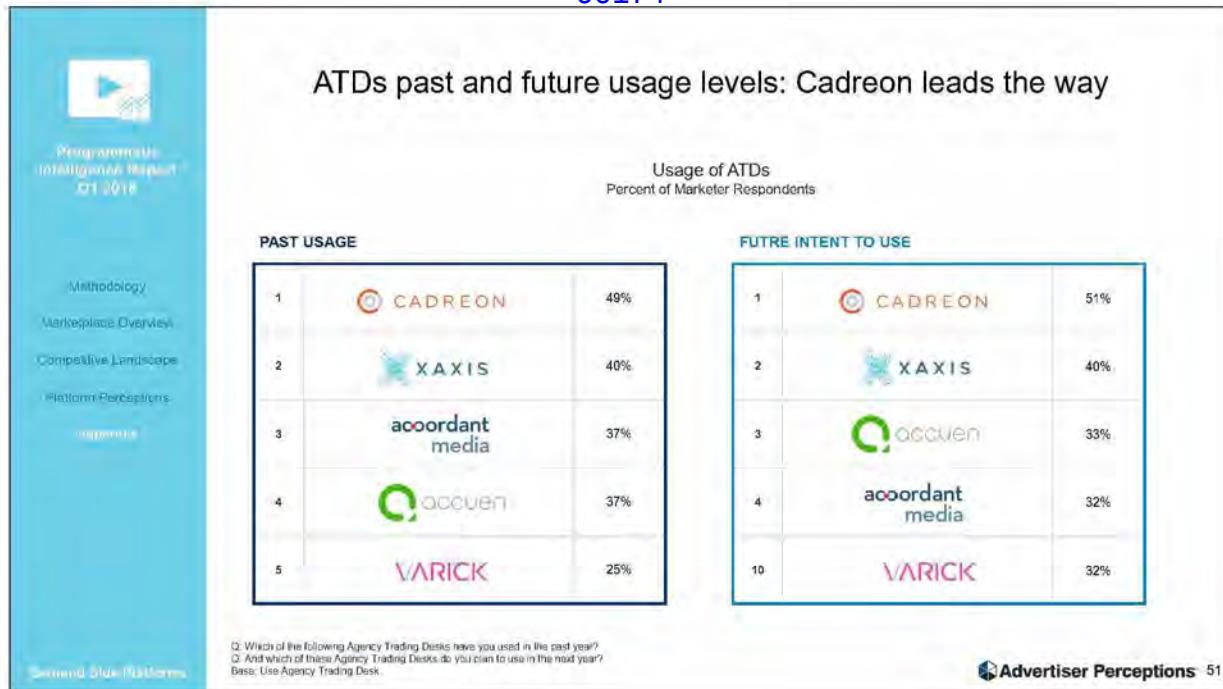
**Why is programmatic growing?**  
Better targeting, leveraging data, efficiencies

Appendix

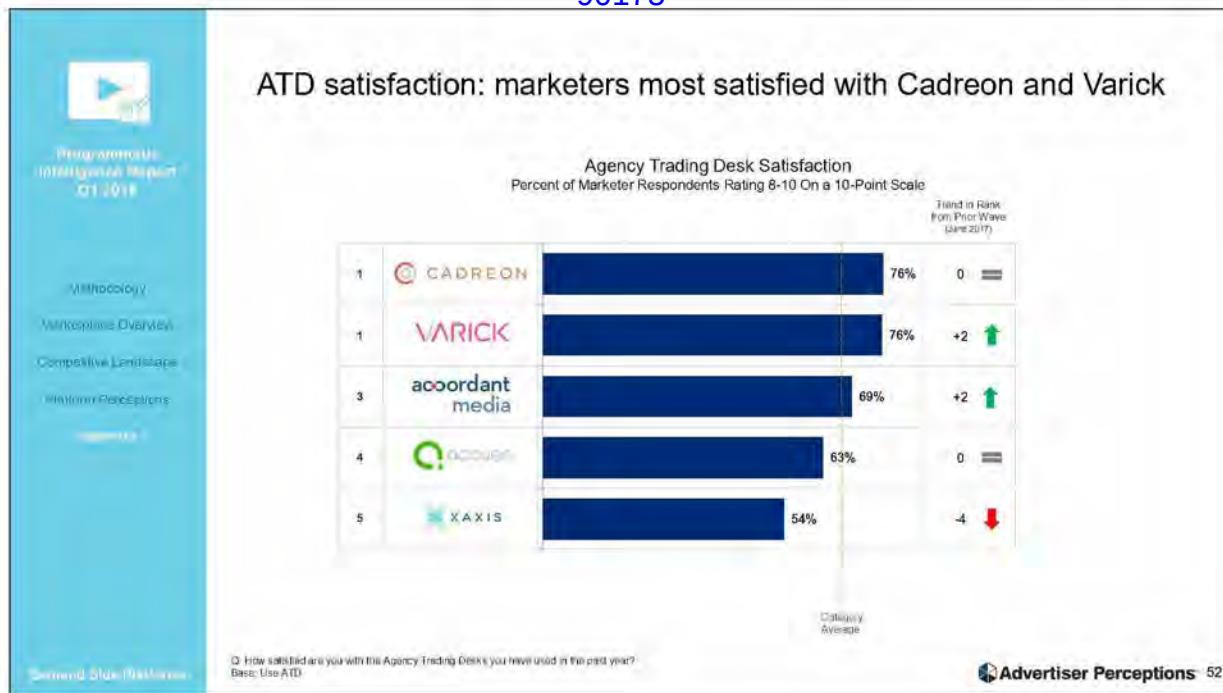
Top Issues Programmatic Ad Buying Solves			
Percent of Respondents Ranking 1-3			
		% Point Change from Prior Wave (June 2017)	% Point Change from Prior Wave (June 2017)
<b>AGENCIES</b>			
1	Improved targeting capabilities	39%	-2
2	More cost efficient than publisher direct	36%	0
3	Better control of data, audiences and tactics	35%	-1
4	Offers unique targeting data/opportunities	35%	+1
5	Broader reach	33%	+7
6	Better time and resource efficiency	26%	-8
7	Better in-flight optimization	24%	+3
8	More creative options	21%	+7
9	Price transparency	19%	-4
10	Simplifies the RFP process	17%	0
<b>MARKETERS</b>			
1	Improved targeting capabilities	38%	-8
2	Offers unique targeting data/opportunities	38%	+8
3	Better control of data, audience & tactics	37%	0
4	Broader reach	34%	+2
5	Better time and resource efficiency	34%	-2
6	More cost efficient than publisher direct	34%	+3
7	Price transparency	24%	+3
8	Simplifies the RFP process	21%	-1
9	Better in-flight optimization	19%	-2
10	More creative options	17%	-5

Q: Which of the following are the top issues that programmatic ad buying helps solve?  
Base: Total Programmatic Respondents

Q35



Q115, Q116



Q120

When advertisers think of ad tech partners, what do they want most?  
Transparency, ROI and Ease of Use

**15% Transparency**

**8% ROI/Results**

**7% Ease of Use**

**Companies Doing Best Job**

Company
Google
theTradeDesk
Sizmek (formerly Rocket Fuel)

**Companies Doing Best Job**

Company
Google
IBM
Microsoft

**Companies Doing Best Job**

Company
Google
theTradeDesk

Q: Thinking of ad tech partners in general, what do you most want from the company you work with in terms of creating the best possible ad tech implementation for you to achieve your programmatic advertising goals?  
Q: Which single company (media brand or ad tech brand) does the best job?  
Base: Total Programmatic Respondents

**Advertiser Perceptions** 53

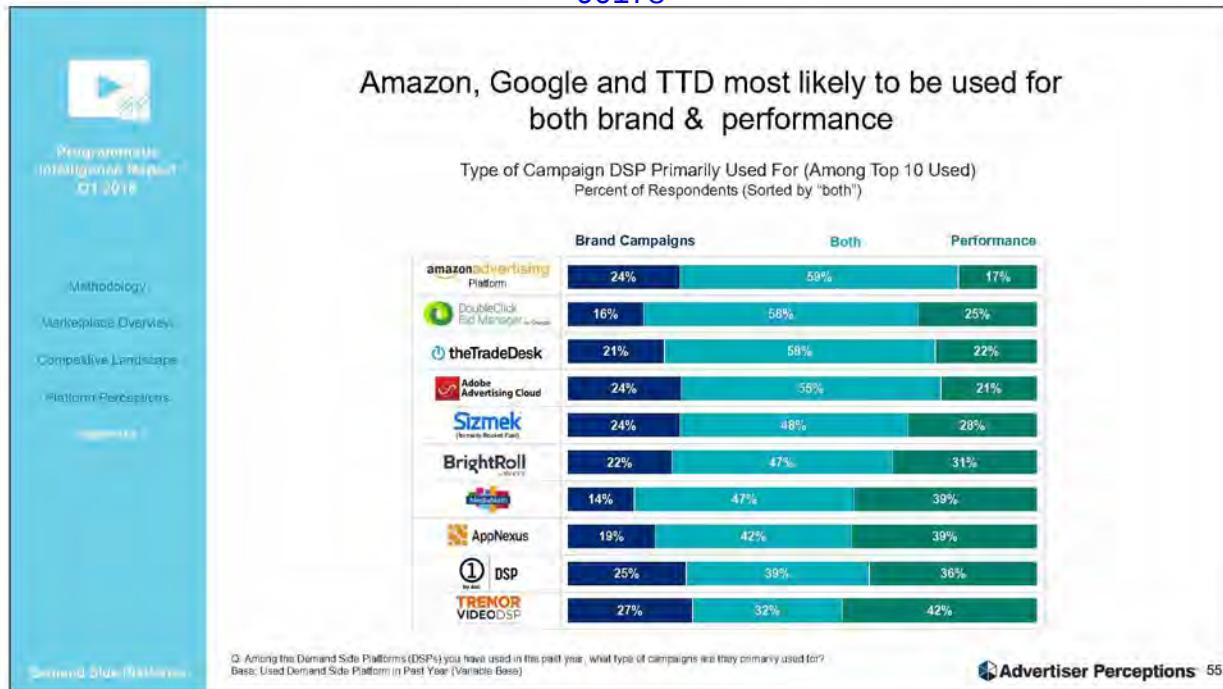
Q52a, Q52b

**Brand characterization (full detail)**

	DSP	DMP	Ad Networks	Supply Side Platform	Agency Trading Desk	Other/ Don't Know	Both DSP and DMP
Amazon Advertising	13%	12%	39%	19%	10%	10%	33%
Accordant Media	7%	10%	19%	10%	11%	37%	20%
Accuen	7%	13%	16%	9%	11%	34%	23%
AppNexus	14%	13%	21%	14%	11%	23%	26%
BrightRoll (Yahoo)	18%	10%	38%	12%	11%	16%	25%
Cadreon	7%	10%	14%	9%	13%	39%	22%
Centro	11%	11%	23%	10%	11%	30%	22%
Criteo	10%	10%	19%	10%	8%	32%	26%
DataXu	9%	12%	16%	12%	10%	28%	25%
DoubleClick Bid Manager	13%	8%	29%	13%	16%	13%	33%
Salesforce (formerly Krux)	7%	21%	17%	16%	12%	18%	29%
Marketo	8%	13%	18%	12%	12%	33%	23%
MediaMath	15%	11%	22%	11%	12%	19%	29%
Oracle/Bluekai	8%	22%	20%	14%	12%	13%	33%
ONE by AOL	10%	9%	30%	9%	9%	22%	29%
Sizmek (formerly Rocket Fuel)	11%	11%	20%	11%	9%	26%	27%
The Trade Desk	12%	8%	16%	8%	33%	15%	26%
Tremor Video	15%	8%	27%	12%	8%	24%	20%
Adobe Ad Cloud (formerly TubeMogul)	10%	11%	24%	13%	10%	19%	32%
Turn	13%	11%	18%	12%	8%	27%	25%
Varick Media	7%	10%	18%	13%	12%	34%	22%
Viant	10%	7%	20%	11%	10%	32%	25%
Xaxis	10%	11%	14%	8%	14%	33%	21%
Quantcast	11%	14%	22%	12%	9%	25%	22%
Adar	5%	9%	16%	10%	9%	43%	20%
BidCollect	11%	10%	18%	13%	12%	32%	21%
Videology	13%	8%	32%	8%	10%	25%	22%

Q100a: How would you characterize the following brand?  
Base: Total Programmatic Respondents

**Advertiser Perceptions** 54



Q233a - NEW



Programmatic  
Intelligence Report  
Q1 2018

Methodology  
Methodology Overview  
Competitive Landscape  
Platform Perceptions  
Appendix

Surveyed 500 Advertisers

	Percent of Respondents								Top Brand By Format
	Display	Mobile	Video	Advanced TV	Audio	Native	Social	Digital OOO	
CADARRA	20%	23%	23%	17%	17%	22%	19%	9%	
ADALINE	25%	30%	22%	16%	15%	20%	20%	10%	
Adobe Advertising	37%	38%	42%	30%	18%	24%	22%	12%	
amazon	<b>49%</b>	<b>49%</b>	34%	29%	22%	30%	29%	16%	
Applexus	36%	32%	28%	16%	18%	23%	22%	10%	
BlueLinx	25%	24%	24%	22%	16%	28%	18%	8%	
BrightRoll	31%	34%	40%	23%	15%	24%	18%	9%	
centro	33%	30%	32%	23%	16%	25%	23%	9%	
criteo	31%	28%	19%	20%	16%	23%	18%	13%	
DataXO	31%	31%	30%	18%	16%	24%	23%	7%	
drawbridge	28%	28%	25%	19%	16%	21%	20%	10%	
dstillery	28%	27%	25%	19%	18%	18%	18%	9%	
Facebook	<b>49%</b>	<b>46%</b>	41%	25%	20%	<b>30%</b>	25%	13%	
Google	40%	37%	33%	20%	17%	24%	24%	10%	
Impression DSP	37%	37%	38%	20%	17%	24%	15%	7%	
quantcast	30%	30%	26%	18%	15%	17%	14%	10%	
Sizmek	38%	37%	35%	20%	14%	22%	19%	12%	
theTradeDesk	46%	37%	36%	26%	<b>27%</b>	26%	22%	11%	
Turner	20%	23%	<b>46%</b>	24%	14%	19%	18%	7%	
TURN	34%	31%	33%	22%	20%	17%	17%	8%	
VIANT.	31%	29%	28%	21%	17%	21%	23%	10%	
Videology	18%	19%	<b>46%</b>	24%	17%	23%	14%	10%	

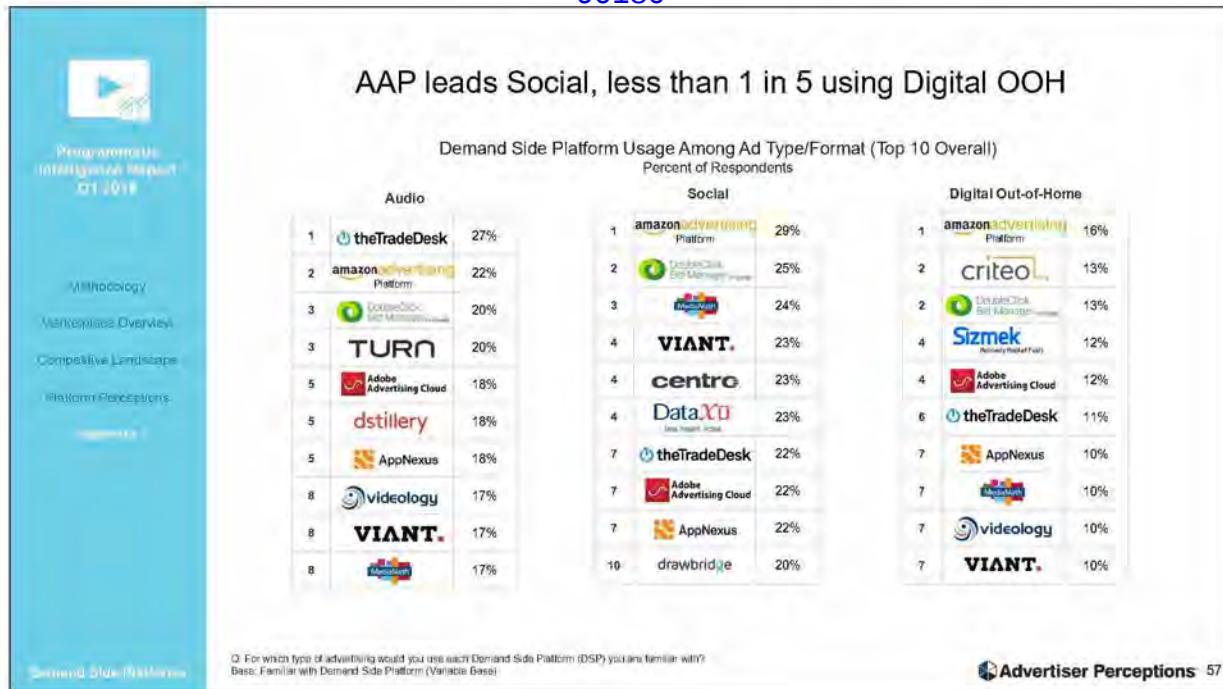
Q: For which type of advertising would you use which Demand Side Platform (DSP) you are familiar with?  
Base: Familiar with Demand Side Platform (Variable Basis)

Advertiser Perceptions 56

Q232

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Q232

How the best brands are delivering ad tech implementation

**Microsoft**

*Have great customer service and great protection.*  
- Agency President

*They have multiple platform solutions.*  
- Marketer, Strategic Exec

*They have quality products.*  
- Agency VP

**IBM**

*Bring new insight into advertising.*  
- Marketer, Strategic Exec

*Keep us in the loop with what is going on.*  
- Agency Supervisor

**Sizmek**  
(formerly Rocket Fuel)

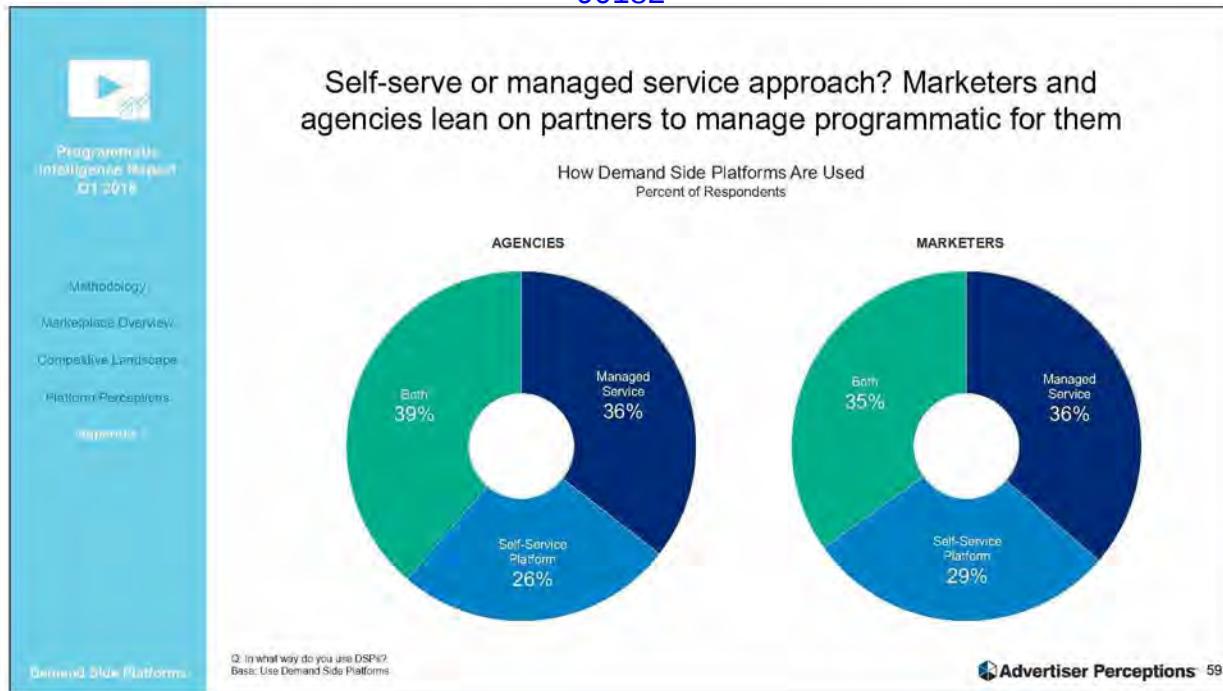
*Offer both a DMP and DSP platform that work very well with a client's marketing platform. They do a great job of optimizing the target audience to maximize engagement and interaction..*  
- Agency Director

*They are upfront about possible roadblocks, set realistic expectations and go above and beyond to help garner the best results possible. customer service has been excellent.*  
- Agency VP

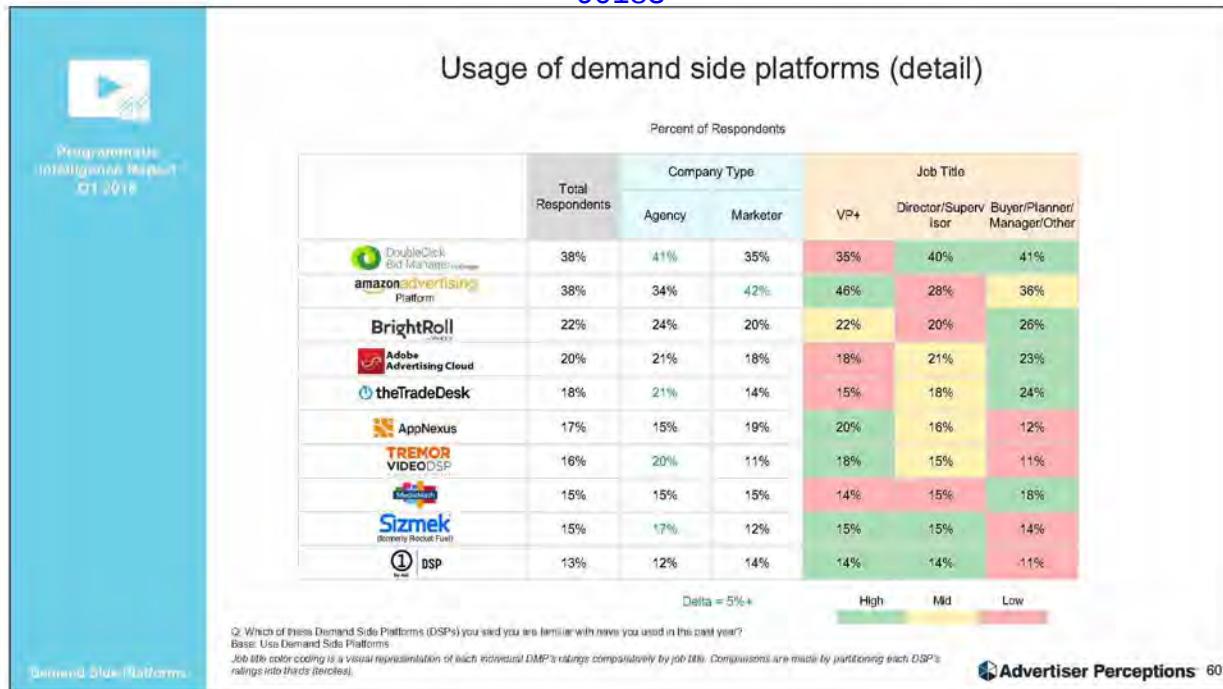
Q: What do they do especially well?  
Basis: Total Programmatic Respondents

Advertiser Perceptions 58

Q52c



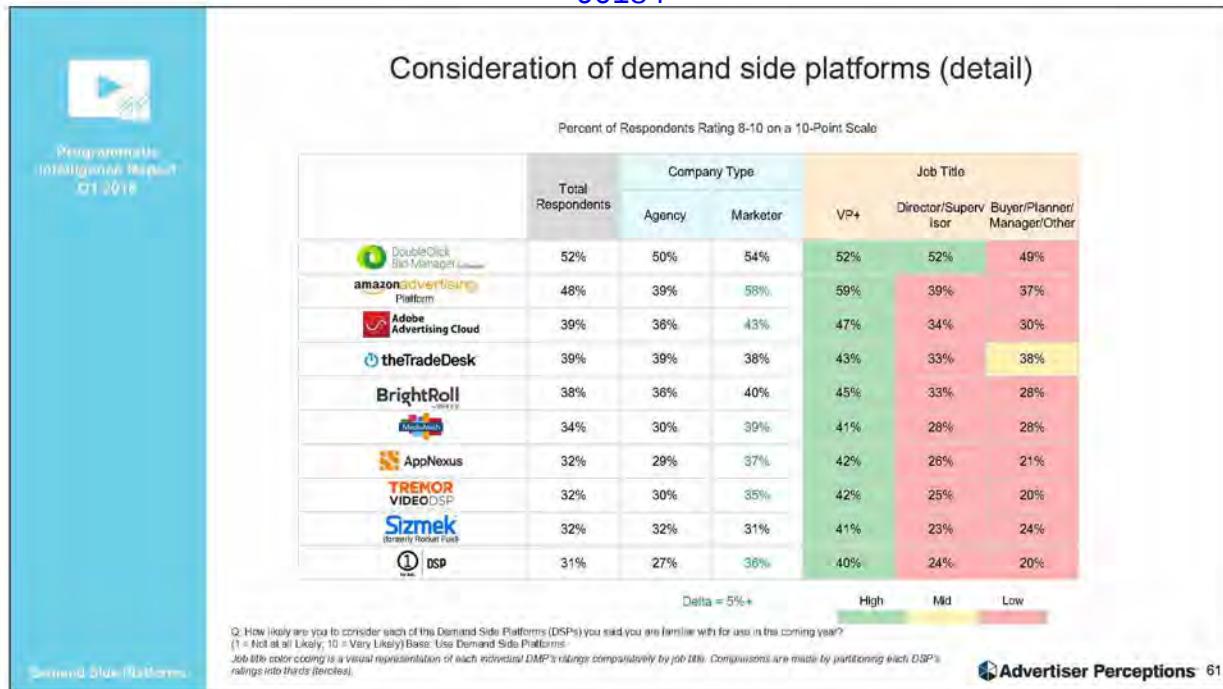
Q216



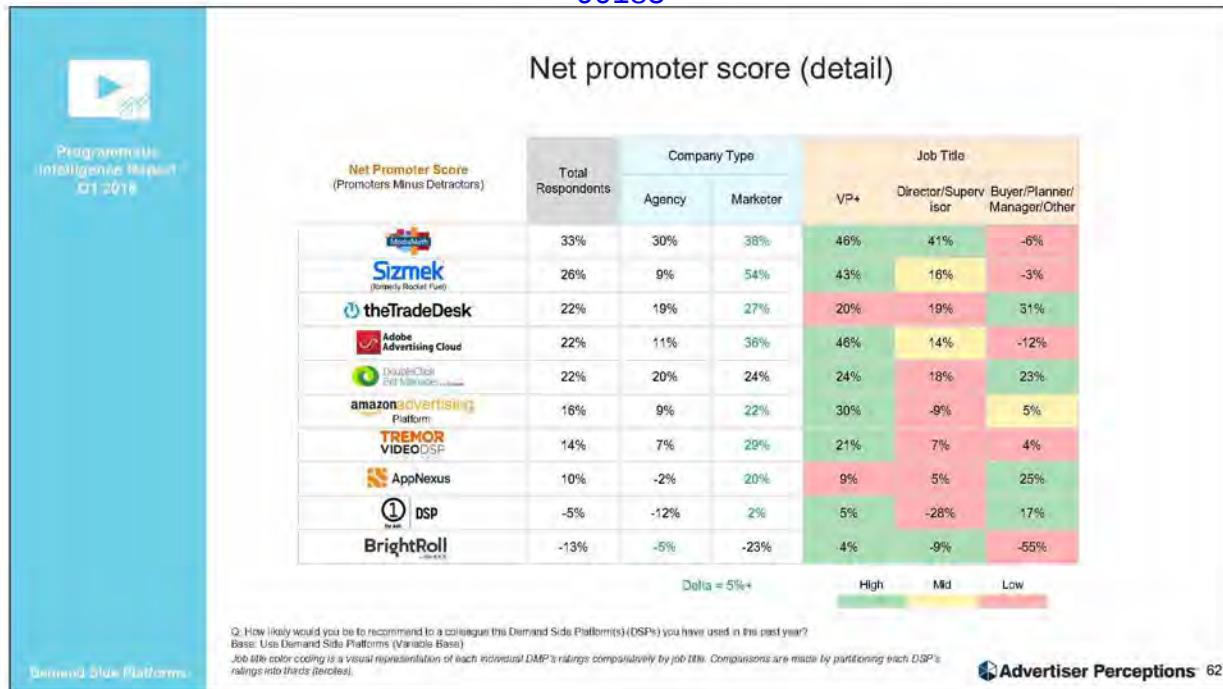
Q215

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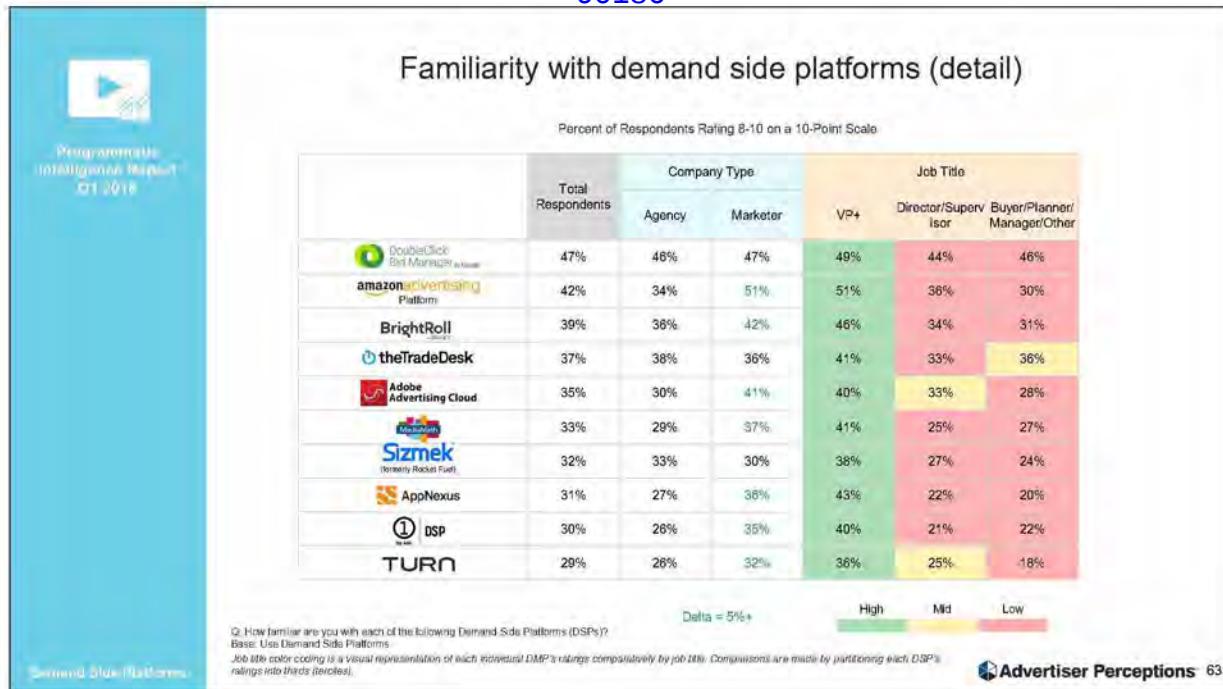
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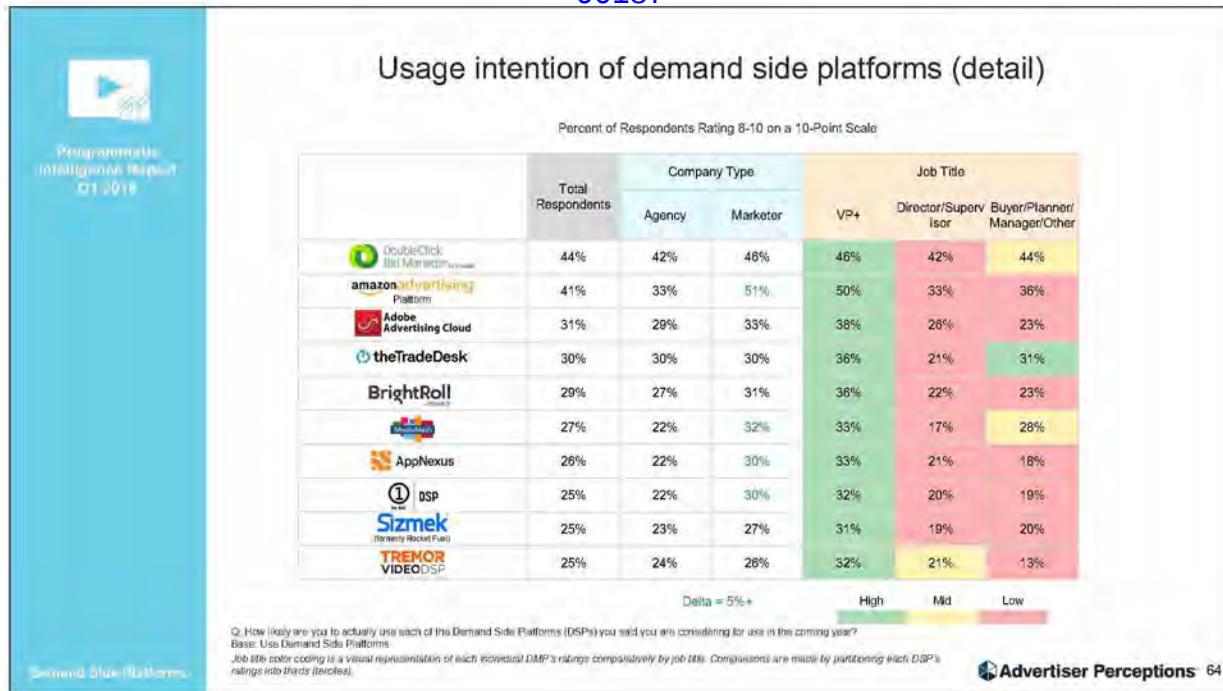
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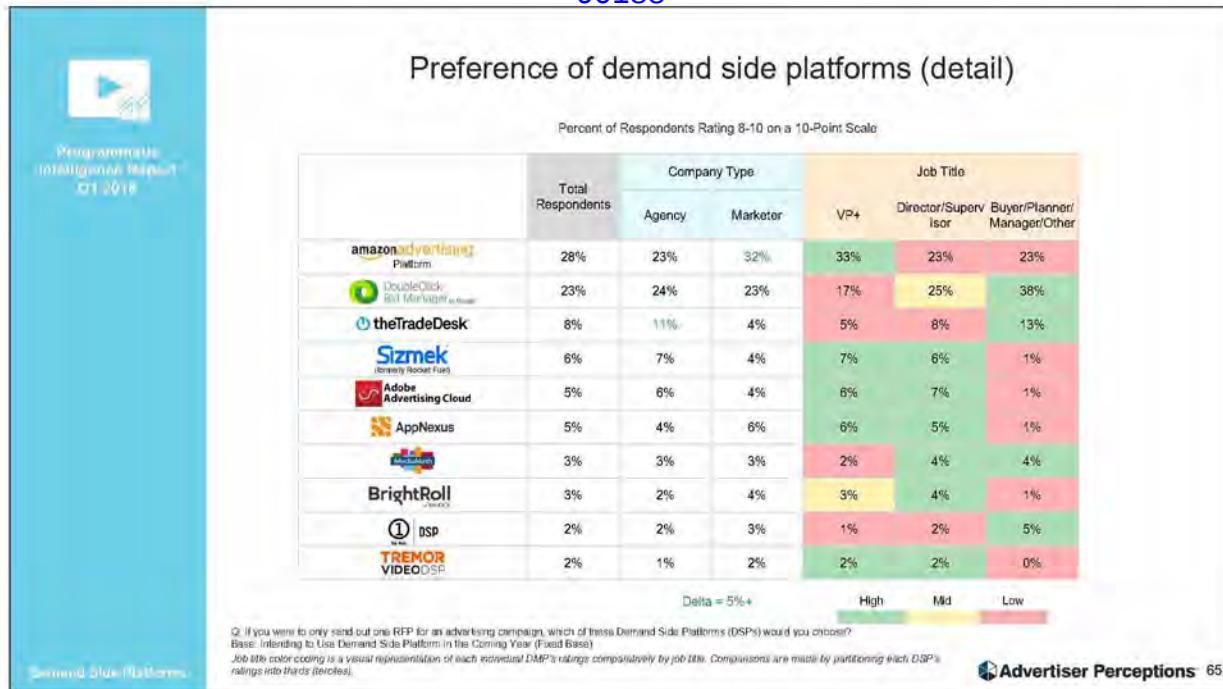
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Q210



Q225



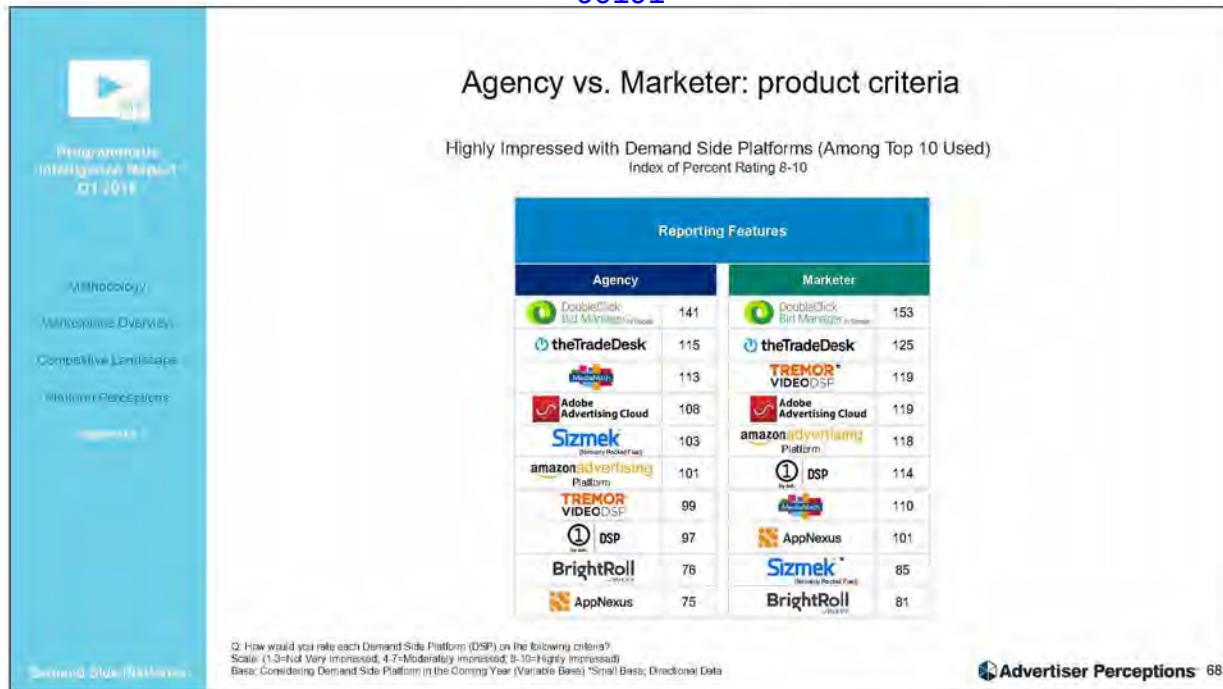
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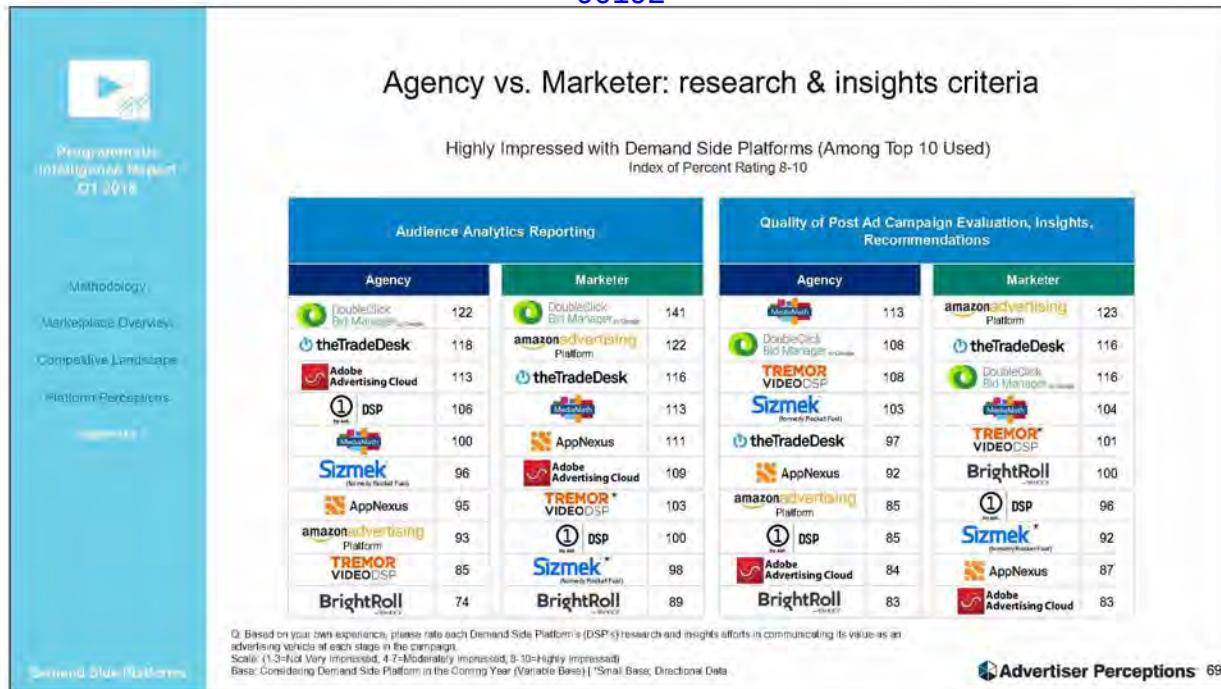
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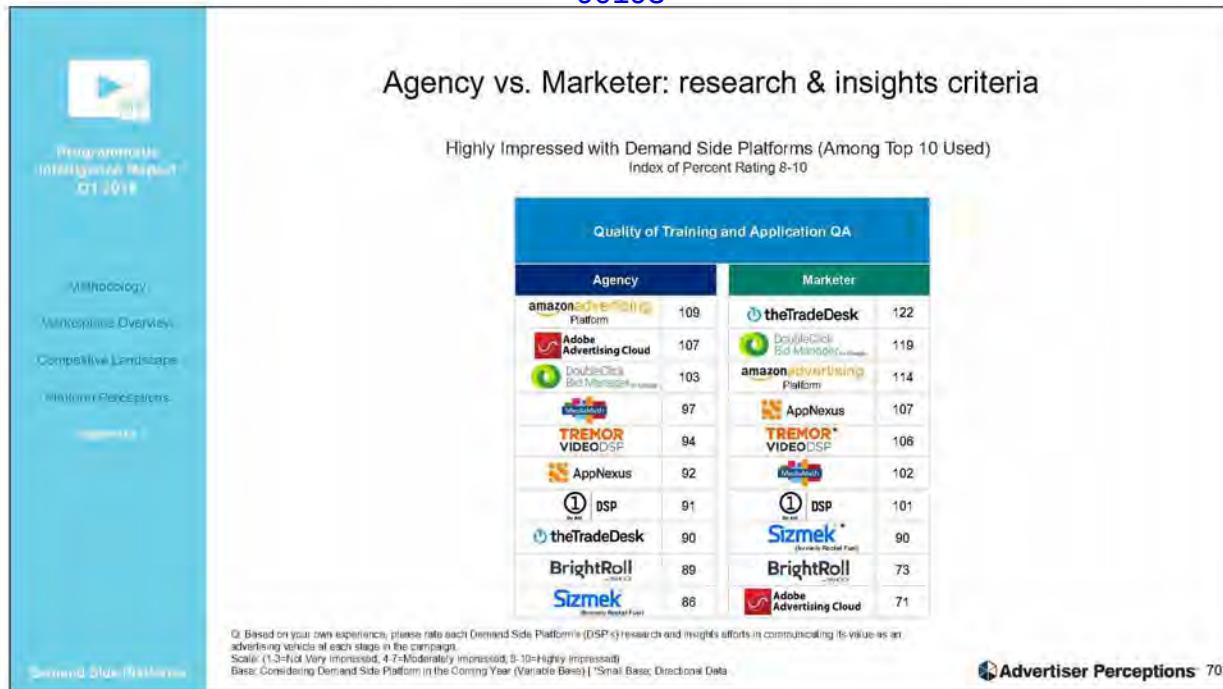
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Q235



Q240



Q240



Q245



Q245



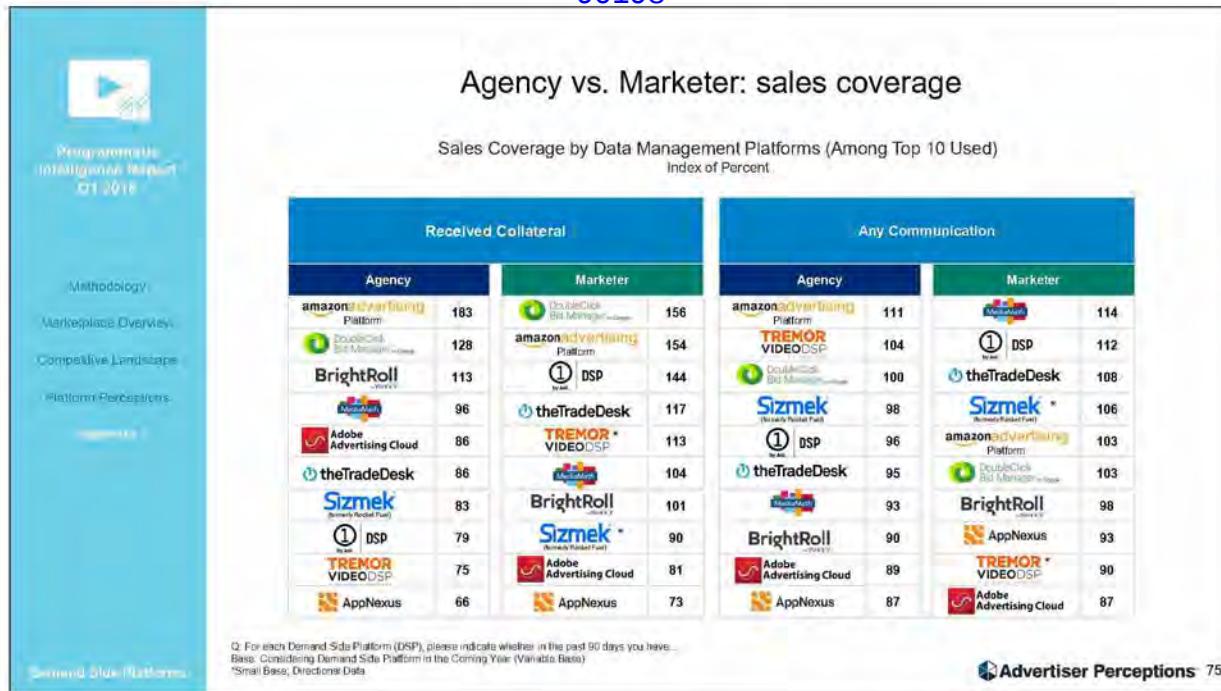
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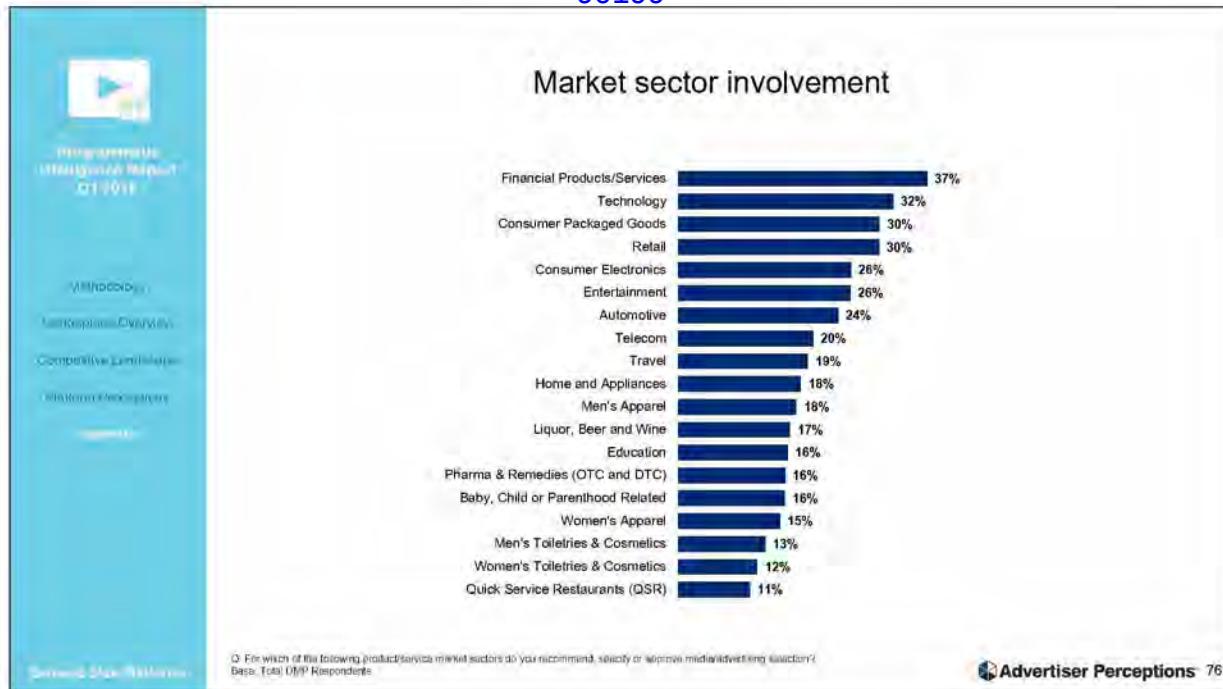
Q250

Meetings in person (Net) = 1) Had small group meeting in person with representative(s) from media brand OR 2) Had in person presentations on market topics or training

Video conference/phone/email (Net) = 1) Had technology enabled meetings/conferences on web, video, phone OR 2) Had email or phone conversations with sales rep(s)



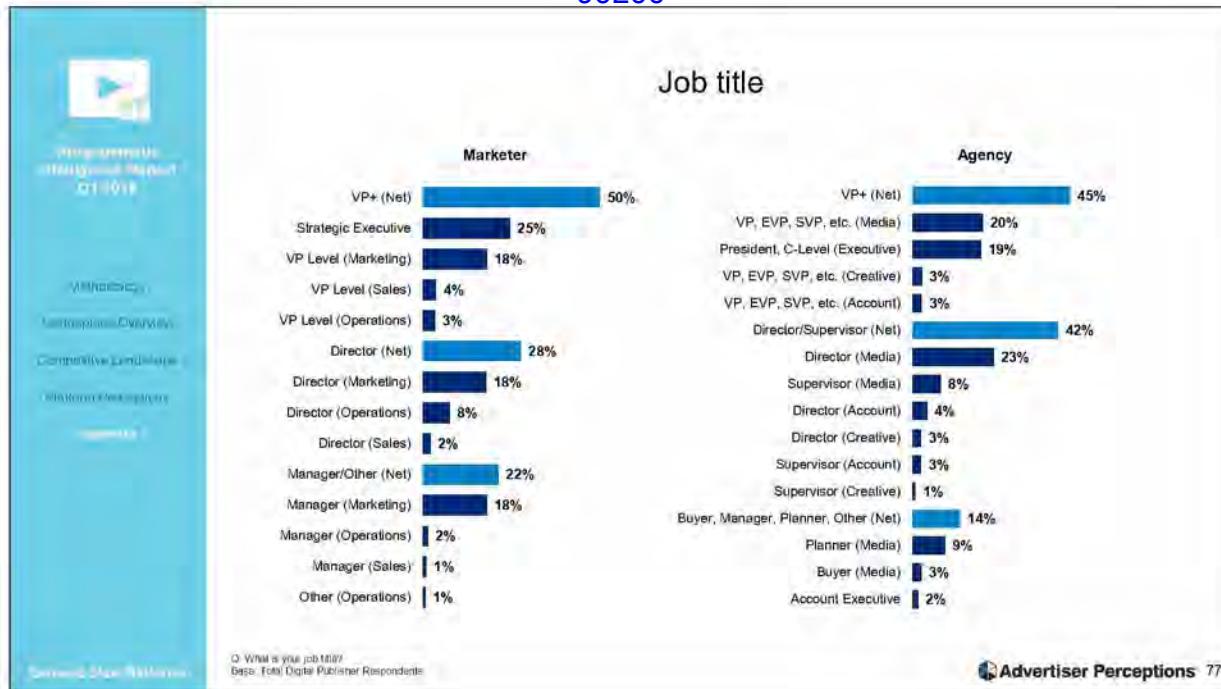
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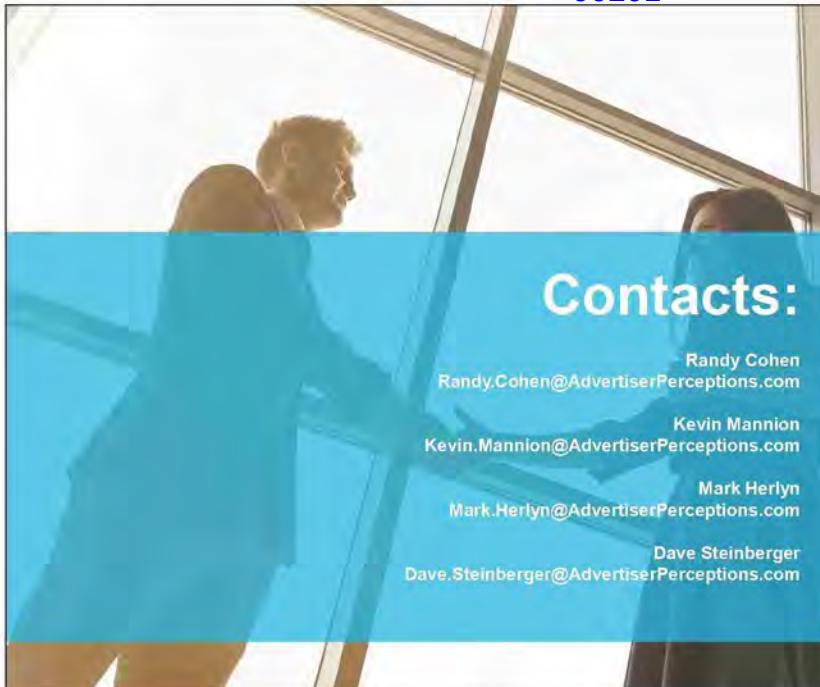
QS60

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GOOG-AT-MDL-009555781



QS65



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The Stronger Your Brand  
The More You'll Sell™

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